

STIC Search Report

STIC Database Tracking Number: 207550

TO: Duc Truong

Location: Remsen 10d71

Art Unit: 1711

November 16, 2006

Phone: 571-272-1081

Serial Number: 10 / 517042

From: Jan Delaval Location: EIC 1700

Remsen 4a30

Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes								
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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name:	nber 302 - IAI	Examiner # : 6933 D Serial Number: 65 Serial Preferred (circle): P	APER DISK E-MAIL
If more than one search is submitte	ed, please prioritize	searches in order of need	1. *******************
If more than one search is submitted ***********************************	rch topic, and describe as words, synonyms, acronyn t may have a special mean	specifically as possible the subjectors, and registry numbers, and coming. Give examples or relevant c	t matter to be searched. bline with the concept or
Title of Invention:			
Inventors (please provide full names):			
Earliest Priority Filing Date:		_	
For Sequence Searches Only Please include a appropriate serial number.			
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STAFF USE ONLY	Type of Search	Vendors and cost who	-
Searcher: 22504	NA Sequence (#)	Dialog	
Searcher Phone #:	AA Sequence (#) Structure (#)	Ouestel/Orbit	
Searcher Location:	Bibliographic	Dr.Link	
Date Searcher Picked Up: 11 (16/05) Date Completed: 4 (16/06)	Litigation	Lexis/Nexis	
	Fulltext	Sequence Systems	
Searcher Prep & Review Time:	Patent Family	WWW/Internet	
Ciencal Prep Time.	0.1	Other (specify)	

=> fil reg FILE 'REGISTRY' ENTERED AT 07:59:10 ON 16 NOV 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 American Chemical Society (ACS)

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STRUCTURE FILE UPDATES: 15 NOV 2006 HIGHEST RN 913321-83-2 DICTIONARY FILE UPDATES: 15 NOV 2006 HIGHEST RN 913321-83-2

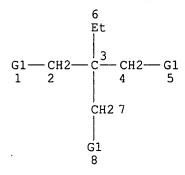
New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html



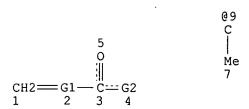
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GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L23 35943 SEA FILE=REGISTRY SSS FUL L21

L24 STR



VAR G1=CH/9 VAR G2=O/X

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

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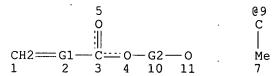
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L46 STR



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VAR G2=AK/ID
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

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L50 1830 SEA FILE=REGISTRY SUB=L26 CSS FUL L46 NOT L48

100.0% PROCESSED 4075 ITERATIONS 1830 ANSWERS

SEARCH TIME: 00.00.01

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L16
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L2
             75 S E1-E75
L3
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L4
L5
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L6
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L7
            104 S L6 AND C3H60
L8
             98 S L7 AND 75-21-8/CRN
L9
             0 S L7 AND 25322-68-3/CRN
L10
             97 S L8 AND 75-56-9/CRN
L11
             2 S L8 AND (31714-45-1 OR 25322-69-4)/CRN
L12
             98 S L10, L11
L13
             6 S L7 NOT L12
L14
             39 S L12 NOT C6/ES
L15
             36 S L14 NOT 56-81-5/CRN
L16
             34 S L15 NOT OC4-C6/ES
                SEL RN 4 5 8 9 14 17 18 25 27 29-31 33
             13 S E76-E88
L17
             21 S L16 NOT L17
L18
L19
             16 S L2 AND L4
L20
              6 S L19 NOT L18
                SAV L18 TRUONG517/A
L21
                STR
L22
             50 S L21
L23
          35943 S L21 FUL
L24
                STR
L25
             50 S L24 SAM SUB=L23
L26
          15579 S L24 FUL SUB=L23
L27
            499 S L26 AND (75-21-8 OR 25322-68-3)/CRN
L28
           2681 S L26 AND C2H40
L29
           2681 S L27, L28
L30
            266 S L29 AND (75-56-9 OR 31714-45-1 OR 25322-69-4)/CRN
L31
            431 S L29 AND C3H60
L32
            431 S L30, L31
L33
            154 S L32 NOT (C6 OR OC4-C6)/ES
L34
            117 S L33 NOT L12
L35
            111 S L34 NOT OC4/ES
L36
            39 S L35 AND (N OR S OR SI OR P)/ELS
L37
             72 S L35 NOT L36
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L38
             70 S L37 NOT 56-81-5/CRN
L39
             65 S L38 NOT C4H4O4
L40
             34 S L39 NOT (UNSPECIFIED OR C5-C6-C6-C6/ES)
L41
             6 S L40 AND NR>=3
L42
             28 S L40 NOT L41
                SEL RN 2 4-9 11 16 18 19 21 23-28
L43
             10 S L42 NOT E89-E106
L44
                STR L24
L45
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L46
                STR L44
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L47
L48
                SCR 1992 OR 2021 OR 2016 OR 2026 OR 1852 OR 1855 OR 1867
1.49
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L50
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L51
           1762 S L50 NOT (C6-C6 OR C5-C6 OR OC4-C6)/ES
L52
            524 S L51 AND L29 NOT L32
L53
            336 S L52 NOT UNSPECIFIED
L54
              0 S L53 AND (C2H4O AND C3H6O)
L55
                STR L46
L56
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L57
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L58
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L63
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L65
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L72
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L73 ·
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L74
              8 S L72 AND BASF?/PA,CS
L75
             8 S L73, L74
L76
             3 S L72 NOT P/DT
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L85
L86
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L89
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=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 07:59:48 ON 16 NOV 2006
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FILE COVERS 1907 - 16 Nov 2006 VOL 145 ISS 21
FILE LAST UPDATED: 15 Nov 2006 (20061115/ED)
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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
=> d 191 bib abs hitstr retable tot
    ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
1,91
ΑN
     2004:857643 HCAPLUS
DN
     141:350865
TI
    Mixtures of polyalkoxylated trimethylolpropane (meth)acrylates for
   crosslinked hydrogel manufacturing.
IN
     Popp, Andreas; Daniel, Thomas; Schroeder,
     Juergen; Jaworek, Thomas; Funk, Ruediger;
     Schwalm, Reinhold; Weismantel, Matthias; Riegel,
    Ulrich
PA
    BASF Aktiengesellschaft, Germany
SO
     PCT Int. Appl., 61 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     German
FAN.CNT 8
     PATENT NO.
                        KIND
                                DATE
                                           APPLICATION NO.
                                                                   DATE
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    WO 2004087790
                         A2
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PΙ
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     WO 2003-EP305953
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     WO 2004-EP3551
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     MARPAT 141:350865
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A mixture of ≥ 2 polyalkoxylated trimethylolpropane (meth)acrylates I, II, III (AO1, AO2 and AO3 = EO, PO or/and BO, EO = OCH2CH2, PO = OCH2CHCH3 or OCH(CH3)CH2, BO = OCH2CHEt or OCH(Et)CH2, p1 + p2 + p3 = 28 - 75, n1 + n2 + n3 = 28 - 60, m1 + m2 + m3 = 4 - 13, R1, R2 and R3 = H or CH3) prepared by reacting a mixture of alkoxylated trimethylolpropanes with (meth)acrylic acid in the presence of ≥ 1 esterification catalyst and ≥ 1 polymerization inhibitor is used as crosslinking agent for manufacture of a swellable

crosslinked hydrogel (superabsorbing polymer), as raw material for paints, as additives to cement and for polymer dispersion and polyacrylates manufacture Hydrogel manufacture comprises steps of (a) radical polymerization of an ester mixture

with (meth)acrylic acid optionally in the presence of monoethylenically unsatd. compds., hydrophilic monomers (such as sodium acrylate) and radical initiators, (b) drying and (c) milling of the resulting mixture This, mixing 1427 weight parts of ethoxylated and propoxylated trimethylolpropane, 216 weight parts of acrylic acid, 5 weight parts of H2SO4

345 weight parts of methylcyclohexane, adding 3 weight parts of hydroquinone monomethyl ether, 1 weight part of triphenylphosphite, 1 weight part of hypophosphoric acid gave (after removing an azeotropic water) a polymer having viscosity 330 mPa s, used as a crosslinking agent for acrylic acid

in

and sodium acrylate for swellable hydrogel manufacturing IT $824950{-}59{-}6P$

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(crosslinked hydrogel; mixture of polyalkoxylated trimethylolpropane (meth)acrylates for swellable crosslinked hydrogel (superabsorbing polymer) manufacture)

RN 824950-59-6 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane diblock polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 2

CRN 79-10-7 CMF C3 H4 O2

CM 3

CRN 824950-31-4

CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 4

CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 77-99-6

CMF C6 H14 O3

$$CH_2-OH$$
 $HO-CH_2-C-Et$
 CH_2-OH
 CH_2-OH

CRN 697765-47-2 CMF (C3 H6 O . C2 H4 O) xCCI **PMS**

CM

CRN 75-56-9 CMF C3 H6 O



CM 8

CRN 75-21-8 CMF C2 H4 O



CN

IT 824950-31-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(polyalkoxylated trimethylolpropane (meth)acrylates; mixture of polyalkoxylated trimethylolpropane (meth)acrylates for swellable crosslinked hydrogel (superabsorbing polymer) manufacture)

RN 824950-31-4 HCAPLUS

Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate, diblock (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

 $HO-C-CH=CH_2$

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CM
CRN
    77-99-6
CMF C6 H14 O3
```

CRN 697765-47-2 CMF (C3 H6 O . C2 H4 O)x CCI PMS

> CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L91 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:857543 HCAPLUS

DN 141:350828

Mixtures of at least two (meth) acrylates having at least two double bonds for manufacture of hydrogels

Riegel, Ulrich; Daniel, Thomas; Hermeling, Dieter; IN Elliott, Mark; Schwalm, Reinhold

PA BASF Aktiengesellschaft, Germany

PCT Int. Appl., 84 pp. SO CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 8

PATENT NO. KIND DATE APPLICATION NO. DATE

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WO 2004087635
PI
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                                     20041014
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               GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
               LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
               PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
               TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
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               FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
               BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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     DE 2003-10358372
                                     20031211
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DE 2002-10225943 A 20020611 <--WO 2004-EP3348 W 20040330

OS MARPAT 141:350828

AB Title mixts. for use as crosslinkers in the manufacture of superabsorbent hydrogels with high hydrolysis resistance and particle formation during manufacture have GFV 200-600 g/mol double bonds, with GFV = Σ ni=1 = α iMWi/Zi [Σ ni=1 α i = 1, α i = mol fraction of compound

(i) in the mixture, n [number of compds. in mixture] \geq 2, Zi = number of double bonds in compound (i), MWi = mol. weight of compound (i)]. A typical hydrogel was manufactured by radical polymerization of 220 g acrylic acid,

2201 g 37.3% aqueous Na acrylate solution, and 5.1 g mixture containing 69.3% 30:5 ethylene

oxide-propylene oxide copolymer trimethylolpropane ether triacrylate and 30.7% Laromer TPGDA.

IT 117989-76-1P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(crosslinker; mixts. of at least two (meth)acrylates having at least two double bonds for crosslinkers for manufacture of hydrogels)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$CH_2-OH$$
 $|$
 $HO-CH_2-C-Et$
 $|$
 CH_2-OH

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 4

CRN 75-56-9

CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



CN

IT 774577-40-1P, Acrylic acid-ethylene oxide-propylene oxide copolymer trimethylolpropane ether triacrylate-Laromer TPGDA-sodium acrylate copolymer 774577-49-0P, Acrylic acid-ethylene oxide-propylene oxide copolymer trimethylolpropane ether triacrylate-sodium acrylate copolymer 774577-55-8P, Acrylic acid-ethylene oxide-propylene oxide copolymer trimethylolpropane ether triacrylate-polyethylene glycol glycerol ether triacrylate-sodium acrylate copolymer 774577-77-4P, Acrylic acid-ethylene oxide-propylene oxide copolymer trimethylolpropane ether triacrylate-polyethylene glycol trimethylolpropane ether triacrylate-sodium acrylate copolymer 774580-94-8P, Acrylic acid-ethylene oxide-propylene oxide copolymer trimethylolpropane ether triacrylate-polypropylene glycol glycerol ether triacrylate-sodium acrylate copolymer RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (mixts. of at least two (meth)acrylates having at least two double

bonds for crosslinkers for manufacture of hydrogels) RN 774577-40-1 HCAPLUS

2-Propenoic acid, polymer with (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate, methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

$$\begin{array}{c} \text{O} & \text{O} \\ \parallel & \parallel \\ \text{H}_2\text{C} = \text{CH} - \text{C} - \text{O} - \text{CH}_2 - \text{CH}_2 - \text{O} - \text{CH}_2 - \text{CH}_2 - \text{O} - \text{C} + \text{$$

3 (D1-Me)

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 117989-76-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 5

CRN 79-10-7 CMF C3 H4 O2

CM 6

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 8

CRN 75-56-9 CMF C3 H6 O



CM 9

CRN 75-21-8 CMF C2 H4 O



RN 774577-49-0 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 2

CRN 79-10-7 CMF C3 H4 O2

CRN 117989-76-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O) x . 3 C3 H4 O2 CM 4 CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 6

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 7

CRN 75-56-9 CMF C3 H6 O

СНЗ

CM 8

CRN 75-21-8 CMF C2 H4 O



RN 774577-55-8 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane polymer with oxirane ether

with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, $\alpha,\alpha',\alpha''-1,2,3$ -propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 101661-95-4 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C12 H14 O6 CCI PMS

PAGE 1-A

PAGE 1-B

$$-CH_{2} - CH_{2} - CH_{2} - CH_{2} - CH_{2}$$

$$-CH_{2} - CH_{2} - CH_{2} - CH_{2}$$

CM 2

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 3

CRN 79-10-7 CMF C3 H4 O2

CRN 117989-76-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 5

CRN 79-10-7 CMF C3 H4 O2

CM 6

CRN 77-99-6 CMF C6 H14 O3

CM 7

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 8

CRN 75-56-9 CMF C3 H6 O

СНЗ

CM 9

CRN 75-21-8 CMF C2 H4 O \angle

CN

RN 774577-77-4 HCAPLUS

2-Propenoic acid, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 28961-43-5

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6

CCI PMS

PAGE 1-A

$$c_{H_2} = c_{H_2} = c_{H$$

PAGE 1-B

CM 2

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

```
CM 3

CRN 79-10-7

CMF C3 H4 O2
```

CM 4 '

CM

CRN 117989-76-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CRN 79-10-7 CMF C3 H4 O2.

5

CM 6

CRN 77-99-6 CMF C6 H14 O3

CM 7

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 8

CRN 75-56-9 CMF C3 H6 O



CRN 75-21-8 CMF C2 H4 O



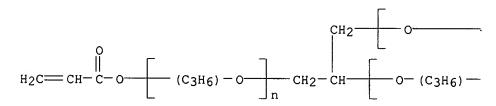
RN 774580-94-8 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, $\alpha,\alpha',\alpha''-1,2,3$ -propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)]] and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 52408-84-1 CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C12 H14 O6 CCI IDS, PMS

PAGE 1-A



PAGE 1-B

$$-(C_{3}H_{6}) \xrightarrow{n} O - C - CH = CH_{2}$$

$$-(C_{3}H_{6}) \xrightarrow{n} O - C - CH = CH_{2}$$

CM 2

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 117989-76-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 5

CRN 79-10-7 CMF C3 H4 O2

CM 6

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM '

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CRN 75-56-9 CMF C3 H6 O



CM 9

2003:991565 HCAPLUS

CRN 75-21-8 CMF C2 H4 O

ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN



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DN
     140:43143
ΤI
     Acrylic esters of alkoxylated trimethylolpropane useful in production of
     hydrogels
ΙN
     Popp, Andreas; Daniel, Thomas; Schroeder,
     Juergen; Jaworek, Thomas; Funk, Ruediger;
     Schwalm, Reinhold; Weismantel, Matthias; Riegel,
     Ulrich
PA
     BASF Aktiengesellschaft, Germany
     PCT Int. Appl., 65 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     German
FAN.CNT 8
     PATENT NO.
                         KIND
                                 DATE
                                             APPLICATION NO.
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             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
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     DE 2003-10358372
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                                 20031211
     WO 2004-EP3348
                          W
                                 20040330
GI
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$$\begin{array}{c} \text{R}^{3} \\ \text{H}_{2}\text{C} = \overset{\mid}{\text{C}} - \text{CO} - (\text{EO})_{\overline{n_{3}}} (\text{PO})_{\overline{m_{3}}} \text{O} \\ & & \text{O} - (\text{PO})_{\overline{m_{1}}} (\text{EO})_{\overline{n_{2}}} \text{CO} - \overset{\mid}{\text{C}} = \text{CH}_{2} \\ & & \text{O} - (\text{PO})_{\overline{m_{2}}} (\text{EO})_{\overline{n_{2}}} \text{CO} - \overset{\mid}{\text{C}} = \text{CH}_{2} \\ & & \text{R}^{2} \\ & & \text{I} \end{array}$$

ΑB Acrylic and/or methacrylic esters of alkoxylated trimethylolpropane have the general formula (I), where EO is -OCH2CH2-, PO independently represents -OCH2CH(CH3) - or -OCH(CH3)CH2-; n1, n2, n3 are independently 4, 5 or 6; the total of n1, n2 and n3 equals to 14, 15 or 16; m1, m2, m3 are independently 1, 2 or 3; the total of m1, m2 and m3 equals to 4, 5 or 6; and R1, R2 and R3 are independently H or CH3. The esters can be used as crosslinking agents in production of hydrogels, or as components in cement additive compns. or in production of polymer dispersions and lacquers. Thus, an alkoxylated trimethylolpropane was produced by reacting trimethylolpropane (77) in water in the presence of KOH (0.5) with propylene oxide (167) at 120-130°, followed by adding and reacting with ethylene oxide (379 g) at 145-155°. The alkoxylated trimethylolpropane (887) was mixed with acrylic acid (216) and esterified in the presence of H2SO4 (5 parts) and polymerization inhibitors. alkoxylated trimethylolpropane triacrylate was used as a crosslinking agent in radical polymerization with acrylic acid and sodium acrylate.

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IT 150604-34-5P
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RL: IMF (Industrial manufacture); PREP (Preparation) (acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 150604-34-5 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tris(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2\\ \parallel\\ \text{Me-C-CO}_2\text{H} \end{array}$$

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O $^{\circ}$

IT 633314-15-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 633314-15-5 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane block polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

CM 2

CRN 79-10-7 CMF C3 H4 O2

CM 3

CRN 633314-14-4 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 4

CRN 79-10-7 CMF C3 H4 O2

CRN 77-99-6 CMF C6 H14 O3

$$CH_2-OH$$
 $HO-CH_2-C-Et$
 CH_2-OH

CM 6

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 7

CRN 75-56-9 CMF C3 H6 O



CM 8

CRN 75-21-8 CMF C2 H4 O

$\overset{\circ}{\triangle}$

IT 633314-14-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 633314-14-4 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2 .

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



RETABLE

Referenced Author	Year VOL PG	, , , , , , , , , , , , , , , , , , , ,	Referenced
(RAU)	(RPY) (RVL) (RPG		File
Basf Corp	2001	WO 0156625 A	HCAPLUS
Christensen, S	2001	WO 0145758 A	HCAPLUS
Gartner, H	1996	US 5506324 A	HCAPLUS
Kushi, K	1994	US 5356754 A	HCAPLUS

L91 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN AN 2003:991563 HCAPLUS .

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140:28395
DN
ΤI
    Acrylic esters of alkoxylated trimethylolpropane useful in production of
    hydrogels
IN
    Popp, Andreas; Daniel, Thomas; Schroeder,
    Juergen; Jaworek, Thomas; Funk, Ruediger;
    Schwalm, Reinhold; Weismantel, Matthias; Riegel,
    Ulrich
PA
    BASF Aktiengesellschaft, Germany
SO
    PCT Int. Appl., 70 pp.
    CODEN: PIXXD2
    Patent
DT
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    German
FAN.CNT 8
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GΙ
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$$\begin{array}{c|c} CH_2 & O & O & O & O & O \\ \hline & (AO)_{p_3} & O & O & O & O \\ \hline & (AO)_{p_2} & O & O \\ \hline & (AO)_{p_2} & O & O & O \\ \hline & (AO)_{p_2} & O & O \\ \hline & (AO)_{p_2}$$

AB Acrylic and/or methacrylic esters of alkoxylated trimethylolpropane have the general formula (I), where each AO independently represents EO, PO or BO, EO being -OCH2CH2-, PO being -OCH2CH(CH3)- or -OCH(CH3)CH2-, BO being -OCH2CH(CH2CH3)- or -OCH(CH2CH3)CH2-; the total of p1, p2 and p3 equals to an integer from 28 to 75; and R1, R2 and R3 are independently H or CH3. The esters can be used as crosslinking agents in production of hydrogels, or as components in cement additive compns. or in production of polymer dispersions and lacquers. Thus, an alkoxylated trimethylolpropane was produced by reacting trimethylolpropane (77) in water in the presence of KOH (0.5) with ethylene oxide (759) at 145-155°, followed by adding and reacting with propylene oxide (167 g) at 120-130°. The alkoxylated trimethylolpropane (1,427) was mixed with acrylic acid (216) and esterified in the presence of H2SO4 (5 parts) and polymerization inhibitors.

The obtained alkoxylated trimethylolpropane triacrylate was used as a crosslinking agent in radical polymerization with acrylic acid and sodium acrylate.

IT 150604-34-5P

RL: IMF (Industrial manufacture); PREP (Preparation) (acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 150604-34-5 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tris(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CRN 106392-12-5 CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



IT 633314-15-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 633314-15-5 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane block polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) tri-2-propenoate, and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

Na

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CM 2
CRN 79-10-7
CMF C3 H4 O2
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CRN 633314-14-4 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

CM 4

CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 6

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 7

CRN 75-56-9 CMF C3 H6 O СНЗ

CM 8

CRN 75-21-8 CMF C2 H4 O

 \angle

IT 633314-14-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(acrylic esters of alkoxylated trimethylolpropane useful in production of hydrogels)

RN 633314-14-4 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

о || но-с-сн==сн₂

CM 2

CRN 77-99-6 CMF C6 H14 O3

 $\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$

CM 3

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



RETABLE

Referenced Author (RAU)	Year	VOL PG (RVL) (RPG)	Referenced Work (RWK)	Referenced File
(MO)				
Abraham, B	11968	•	US 3380831 A	
Basf Ag	1988		EP 0264841 A	ḤCAPLUS
Dai Ichi Kogyo Seiyaku	1999		EP 0923147 A	HCAPLUS
Gartner, H	1996	'	US 5506324 A	HCAPLUS
Hartmann, H	1997	l I	US 5661220 A	HCAPLUS
Kushi, K	1994	1	US 5356754 A	HCAPLUS
Matsushita Electric Inc	11997	1	EP 0777287 A	HCAPLUS
Ritter, W	1997		US 5648518 A	HCAPLUS

- L91 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
- AN 2003:991562 HCAPLUS
- DN 140:43131
- TI Production of crosslinked hydrogels using esters of polyalcohols and unsaturated carboxylic acids
- IN Jaworek, Thomas; Daniel, Thomas; Wolf, Lothar;
 Koeniger, Rainer; Schwalm, Reinhold; Hartmann, Gabriele; Wickel,
 Stefan
- PA BASF Aktiengesellschaft, Germany
- SO PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 8

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OS
     MARPAT 140:43131
AΒ
     A crosslinked hydrogel is produced by a process comprising the steps of
     (a) reacting a polyalc. A with at least one ethylenically unsatd.
     carboxylic acid B in the presence of an esterification catalyst C, at
     least one polymerization inhibitor D and, optionally, a solvent E forming an
     azeotrope with water under conditions of synthesis of an ester F, (b)
     optionally, removing at least a part of water from the reaction mixture
     during and/or after the step (a), (c) optionally, neutralizing the
     reaction mixture, (d) removing the optional azeotrope-forming solvent by
     distillation, (e) stripping the reaction mixture with an inert gas, (f)
polymerizing
     the reaction mixture with optional monoethylenically unsatd. compds. N and
     at least one other hydrophilic monomer M in the presence of a radical
     initiator K and, optionally, a graftable substrate L, (g) optionally,
     crosslinking the polymerized mixture, (h) drying the polymer, and (i)
     optionally, grinding and/or sieving the polymer. Thus, ethoxylated
     trimethylolpropane (Polyol TP 70) (681) was mixed with acrylic acid (414)
     and esterified in methylcyclohexane (365) in the presence of H2SO4 (5
     parts) and polymerization inhibitors with distilling off 102 parts of water
formed
     during the reaction. The ethoxylated trimethylolpropane triacrylate was
     used as a crosslinking agent in polymerization with acrylic acid and sodium
     acrylate.
IT
     634615-81-9P
     RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
     engineered material use); PREP (Preparation); USES (Uses)
        (production of crosslinked hydrogels using esters of polyalcs. and unsatd.
        carboxylic acids)
RN
     634615-81-9 HCAPLUS
CN
     2-Propenoic acid, polymer with 2,2'-[1,2-ethanediylbis(oxymethylene)]bis[o
     xirane], \alpha-hydro-\omega-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-
     ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1),
     1,2-propanediol and sodium 2-propenoate (9CI) (CA INDEX, NAME)
          1
     CM
     CRN
          28961-43-5
          (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6
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PAGE 1-A

PAGE 1-B

CM 2

CRN 7446-81-3 CMF C3 H4 O2 . Na

● Na

CM 3

CRN 2224-15-9 CMF C8 H14 O4

CM 4

CRN 79-10-7 CMF C3 H4 O2

CRN 57-55-6 CMF C3 H8 O2

RETABLE

Referenced Author (RAU)	Year VOL (RPY) (RVL)	(RPG)		Referenced File
Pacf Na	=+======= 11998	•	•	
Basf Ag	, ,	•	EP 0874014 A	HCAPLUS
Basf Corp	2001	1	WO 0156625 A	HCAPLUS
Beck, E	1998	1	US 5821383 A	HCAPLUS
Dow Chemical Co	1993	4	WO 9321237 A	HCAPLUS
Dow Chemical Co	2001	1	WO 0141818 A	HCAPLUS
Hoechst Celanese Corp	1989	1 .	EP 0331845 A	HCAPLUS
Ritter, W	1994	1	US 5350877 A	HCAPLUS
Speitkamp, L	1993		US 5198574 A	HCAPLUS
Stockhausen Chem Fab Gr	m 1998	1	IWO 9847951 A	HCAPLUS

- L91 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
- AN 2000:127557 HCAPLUS
- DN 132:152313
- TI Extraction procedure for the production of pure esters of α, β -ethylenically unsaturated carboxylic acids
- IN Paulus, Wolfgang; Bernhard, Ludwig; Johansson, Astrid Carina; Haas, Guenter; Geisendoerfer, Matthias; Beck, Erich; Leube, Hartmann; Kuse, Reinhold; Jaeger, Ulrich
- PA BASF A.-G., Germany
- SO Ger. Offen., 10 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

LAW	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	DE 19836788	A1	20000224	DE 1998-19836788	19980813 <
	DE 19836788	B4	20060928		
PRAT	DE 1998-19836788		19980813	<	

AB A procedure for the production of pure, water-insol. esters of α, β -ethylenically unsatd. carboxylic acids (e.g., acrylic acid esters of ethoxylated propoxylated trimethylolpropane) from its mixts. which are contaminated with unconverted carboxylic acid(s) and/or acid group-containing catalysts comprises: (A) conducting a liquid-liquid extraction against

an aqueous phase containing the esters using a base; and (B) the aqueous base with the

impurities contained in it are phase separated

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IT 117989-76-1P
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RL: PUR (Purification or recovery); PREP (Preparation) (extraction procedure for the production of pure esters of ethylenically unsatd.

carboxylic acids)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} & \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O) x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



RETABLE

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Anon	ı	1	1	EP 0618187 A1	HCAPLUS
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Anon	1	1	1	JP 62106056 A	HCAPLUS
Anon	1	1	1	JP 62106057 A	HCAPLUS
Anon	1 '	1	1	JP 63174951 A	HCAPLUS
Anon	1	1	1	JP 63275544 A	HCAPLUS
Ullmann	11985	IA1	1168	Encyclopedia of Indi	11

L91 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1989:10884 HCAPLUS

DN 110:10884

- TI Copolymers from hydrophobic (meth)acrylic acid esters and hydrophilic monomers, method of their preparation, and application as petroleum emulsion breaker
- IN Barthold, Klaus; Baur, Richard; Crema, Stefano Carlo; Lasowski, Juergen; Oppenlaender, Knut; Heide, Wilfried
- PA BASF A.-G., Fed. Rep. Ger.
- SO Ger. Offen., 16 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

I MIV. C					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	DE 3635489	A1	19880421	DE 1986-3635489	19861018 <
	NO 8704319	A	19880419	NO 1987-4319	19871016 <
	NO 171682	В	19930111	·	•
	NO 171682	С	19930421		
	EP 264841	A2	19880427	EP 1987-115126	19871016 <
	EP 264841	A3	19890712		
	EP 264841	· B1	19921230		
	R: DE, FR, G	GB, IT, NL			
	CA 1309552	A1	19921027	CA 1987-549642	19871019 <
	US 5472617	Α	19951205	US 1993-175935	19931227 <
PRAI	DE 1986-3635489	Α	19861018	<	
	US 1992-905130	B2	19920624	<	

The copolymers useful as petroleum emulsion breakers are prepared from hydrophobic (meth)acrylic acid esters, their alc. components derived from a mixture of polyglycols and polyglycol ethers, with hydrophilic, ethylenic unsatd. monomers, whereby in copolymers (i) all or substantially all free OH-groups are etherified, esterified, or converted into urethane groups and/or (ii) by esterification the acid is neutralized by amine addition Thus, 893 g acrylic acid ester with ethoxylated-propoxylated trimethylolpropane and 95.8 g acrylic acid, in the presence of 453 mg 2,2'-azobisisobutyronitrile and 460 g xylene, were copolymd. at 80° for 3 h to obtain a polymer (K-value 13.2, measured as 1% xylene solution), which was then treated with 14.3 g acetic anhydride at 100° for 3 h for end group protection and neutralized with 7.7 g tributylamine for catalytic acid to yield a final product having 23.8 K-value and <1 OH-number 115165-81-6D, polymers with (meth)acrylates 117801-94-2

T 115165-81-6D, polymers with (meth)acrylates 117801-94-2 117801-95-3 117801-97-5

RL: USES (Uses)

(petroleum emulsion breaker) RN 115165-81-6 HCAPLUS Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), 2-methyl-2-propenoate, block (9CI) CN (CA INDEX NAME) CM 1 CRN 79-41-4 CMF C4 H6 O2 СН₂ $Me-C-CO_2H$ CM 2 CRN 77-99-6 . CMF C6 H14 O3 сн2-он $HO-CH_2-C-Et$ $CH_2 - OH$. CM 3 CRN 106392-12-5 CMF (C3 H6 O . C2 H4 O)x CCI

PMS

CM 4

CRN 75-56-9 CMF C3 H6 O

CH₃

CM 5

CRN 75-21-8

CMF C2 H4 O



RN 117801-94-2 HCAPLUS

CN 2-Propenoic acid, polymer with 2-hydroxyethyl 2-propenoate and methyloxirane block polymer with oxirane ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1) 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 818-61-1 CMF C5 H8 O3

CM 2

CRN 79-10-7 CMF C3 H4 O2

CM 3

CRN 117742-99-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . x C3 H4 O2

CM 4

CRN 79-10-7 CMF C3 H4 O2

CM 5

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 6

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 7

CRN 75-56-9

C3 H6 O

,Q .

СНЗ

CM 8

CMF

CRN 75-21-8 CMF C2 H4 O

 $/^{\circ}$

RN 117801-95-3 HCAPLUS
CN 2-Propenoic acid, polymer with methyloxirane block polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 117742-99-1 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x . x C3 H4 O2

CM 3

CRN 79-10-7 CMF C3 H4 O2

О || HO- C- CH == CH₂

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 5

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) \mathbf{x}

CCI PMS

CM 6

CRN 75-56-9 CMF C3 H6 O



CM 7

CRN 75-21-8 CMF C2 H4 O



RN 117801-97-5 HCAPLUS

CN 2-Propenoic acid, polymer with ethyloxirane block polymer with methyloxirane and oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CRN 117742-97-9

CMF C6 H14 O3 . 3 (C4 H8 O . C3 H6 O . C2 H4 O)x . x C3 H4 O2

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \text{HO-CH}_2-\text{C-Et} \\ \text{CH}_2-\text{OH} \end{array}$$

CM 5

CRN 166089-41-4

CMF (C4 H8 O . C3 H6 O . C2 H4 O) x

CCI PMS

CM 6

CRN 106-88-7 CMF C4 H8 O

CM 7

CRN 75-56-9 CMF C3 H6 O

СНЗ

CRN 75-21-8 CMF C2 H4 O



HO-C-CH=CH2

```
L91 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
AN
    1989:9783 HCAPLUS
DN
    110:9783
ΤI
    Acrylate-amine adducts for radiation-curable compositions
ΙN
    Weiss, Wolfram; Beck, Erich; Jacobi, Manfred; Richter, Peter
PA
    BASF A.-G., Fed. Rep. Ger.
SO
    Ger. Offen., 6 pp.
    CODEN: GWXXBX
DΤ
    Patent
LA
    German
FAN.CNT 1
    PATENT NO.
                      KIND
                              DATE
                                       APPLICATION NO.
                                                              DATE
                      ----
                            -----
    -----
                                       _____
                                                               _____
    DE 3706355
PΤ
                       A1
                             19880908 DE 1987-3706355
                                                             19870227 <--
                       A2 19880921
    JP 63227553
                                         JP 1988-35424
                                                              19880219 <--
    EP 280222
                       A2
                              19880831
                                       EP 1988-102525
                                                              19880220 <--
    EP 280222
                       AЗ
                             19900704
        R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE
PRAI DE 1987-3706355 A
                             19870227 <--
    Addition products of a primary monoamine and an ester of (meth)acrylic acid
    and a polyhydric alc. (0.05-0.4 mol NH2/mol double bonds) have good
    storage stability, cure quickly and completely during irradiation in air, and
    are useful in coatings and printing inks. Ethanolamine 61, tripropylene
    glycol diacrylate 840, and BHT 0.9 g were heated at 60° to give a
    clear, colorless product having viscosity 130 mPa-s (at 23°) before
    and after 6 wk of storage at 60° in the dark. A mixture of the
    product 100, Ph2CO 2, and benzil di-Me ketal 1 g was coated (100 μm) on
    glass and cured in UV light.
   117989-76-1DP, addition products with primary amines
IT
    RL: PREP (Preparation)
       (preparation of storage-stable, photocurable)
RN
    117989-76-1 HCAPLUS
CN
    Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-
    (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX
    NAME)
    CM
         1
    CRN 79-10-7
    CMF C3 H4 O2
```

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



=> d 190 bib abs hitstr retable tot

L90 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:23717 HCAPLUS

DN 143:348711

TI Study on UV-curable coatings for compact disk

AU Guo, Jinbao; Du, Juan; Wei, Jie

CS College of Material Science and Engineering, Beijing University of Chemical Technology, Beijing, 100029, Peop. Rep. China

SO Tuliao Gongye (2003), 33(12), 1-4 CODEN: TLKYD5; ISSN: 0253-4312

PB Huagongbu Tuliao Gongye Yanjiuso

DT Journal

LA Chinese

AB The relation of the performance of UV-curable coatings with active

monomers was studied, and the gel content, curing time, volume shrinkage, light transmittance, impact resistance and pencil hardness of the active monomer system with various functional groups were determined. The results showed that for single monomer system, the bifunctional monomer PO-NPGDA showed the best comprehensive properties, and for mixed monomer system, the trifunctional monomer system IBA/PO-NPGDA/TMPTA showed the best.

IT 866003-83-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(study on UV-curable coatings for compact disk)

RN 866003-83-0 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α,α' -[1,2-ethanediylbis(oxy-2,1-ethanediyl)]bis[ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

CRN 866003-80-7

CMF (C3 H6 O)n (C3 H6 O)n C12 H18 O6

CCI IDS, PMS

PAGE 1-A

$$H_2C = CH - C - O - CH_2 - C$$

PAGE 1-B

$$-CH_2 - CH_2 -$$

CM 2

CRN 15625-89-5 CMF C15 H20 O6

L90 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:20133 HCAPLUS

DN 140:102019

```
TI Photosensitive polymer compositions with good plating resistance and strippability and photosensitive elements containing them
```

IN Sawabe, Masaru; Ishimaru, Toshiaki

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2004004635		20040100	TD 2002 70070	00000000
FI	JP 3795872	A2 B2	20040108 20060712	JP 2003-78279	20030320 <
	JP 2002328469	A2	20021115	JP 2002-18913	19930215 <
	JP 3437179	B2	20030818	•	•
PRAI	JP 2002-18913	A3	19930215	<	
	JP 1993-25691	A3	19930215	<	

AB The compns., useful as plating resists for printed circuit boards, contain ethylenically unsatd. compds. having ≥ 3 unsatd. groups CH2:CR1CO(OR2)m(OR3)nO (R1 = H, Me; R2, R3 = ethylene, propylene; R2 \neq R3; m, n ≥ 1). The photosensitive elements have the photosensitive polymer composition layers on support films.

IT 117989-76-1 161278-82-6

RL: TEM (Technical or engineered material use); USES (Uses) (photosensitive polymer compns. containing ethoxy- and propoxy-containing unsatd. compds. with good strippability for plating resists)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 4

CRN 75-56-9
CMF C3 H6 O

СНЗ

CM 5

CRN 75-21-8 CMF C2 H4 O

 $\overset{\circ}{\triangle}$

RN 161278-82-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2(hydroxymethyl)-1,3-propanediol (3:1), tris(2-methyl-2-propenoate) (9CI)
(CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

CH2 || Me-C-CO2H

CM 2

CRN 77-99-6 CMF C6 H14 O3

 $\begin{array}{c|c} & \text{CH}_2-\text{OH} \\ & | \\ \text{HO-CH}_2-\text{C-Et} \\ & | \\ & \text{CH}_2-\text{OH} \end{array}$

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O) x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:470688 HCAPLUS

DN 139:38047

TI UV-curable coating compositions for protecting optical recording media and the protected media

IN Shoji, Toshihiro

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2003171620	A2	20030620	JP 2001-374143	20011207 <
PRAI	JP 2001-374143		20011207	<	

PRAI JP 2001-374143

20011207 <-
AB Optical recording media bearing recording bits, Ag or its metal alloy such as compact disks are protected by a coating layer which has a 1% MeOH solution pH of 4.5-6.8 and contains 4-benzoyl-4'-methyldiphenyl sulfide as photoinitiator for reducing block error rate. Thus, coating a mixture of trimethylolpropane triacrylate 35, ETA 300 (ethoxylated trimethylolpropane triacrylate) 30, APG 200 (tripropylene glycol diacrylate) 26, 2-hydroxyethyl methacrylate 5, benzophenone 3, 5.7% 4-benzoyl-4'-methyldiphenyl sulfide 6 and Megafac F 173 (fluoro surfactant) 0.2 parts on the surface of a polycarbonate disk substrate bearing a precoated 200-nm phthalocyanine colorant layer and a 80-nm sputtered Ag layer to a thickness of 7 µm and irradiating with UV light at 500 mJ/cm2 gave a protective coating with reduced block error rate.

IT 540469-43-0P, ETA 300-2-hydroxyethyl methacrylate-NK Ester APG 200-trimethylolpropane triacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(UV-curable coating compns. for protecting optical disks with low block error rate)

RN 540469-43-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with
2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate,
α-hydro-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)
ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), and
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate
(9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

3 (D1-Me)

CM 2

CRN 28961-43-5 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CCI PMS

PAGE 1-A

$$H_2C = CH - C - O = CH_2 - CH_2 - O = CH_2 - CH_2$$

PAGE 1-B

$$-CH_{2} - CH_{2} -$$

CM 3

CRN 15625-89-5

CMF C15 H20 O6

CM 4

CRN 868-77-9 CMF C6 H10 O3

L90 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:334431 HCAPLUS

DN 138:339323

TI Simulated security thread by cellulose transparentization

IN Washburn, David E.; Seifert, Harry A.; Gullett, Watson L.

PA USA

SO U.S. Pat. Appl. Publ., 35 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 2003082348	A1	20030501	US 2001-935933	20010823 · <
	US 6607813	В2	20030819		
	CA 2396367	AA	20040131	CA 2002-2396367	20020731 <
PRAI	US 2001-935933	Α	20010823	<	

AB A security document is provided comprising a finished cellulosic substrate having at least one transparentized portion formed therein. The transparentized portion comprises a transparentizing composition that is applied so as to define an area of increased transparency in the substrate. The area of increased transparency includes at least one thin line and resembles a simulated security thread. The transparentizing composition can be applied to form thin lines in a variety of configurations on one or both sides of the substrate.

IT 515179-51-8P, SR 415-SR 604 copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(radiation-curable transparent materials; production of simulated security thread by cellulose transparentization)

RN 515179-51-8 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α -(2-methyl-1-oxo-2-propenyl)- ω -hydroxy-, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CRN 39420-45-6

CMF (C3 H6 O)n C4 H6 O2

CCI IDS, PMS

$$^{\text{H}_2\text{C}}_{\text{Me-C-C}} \circ (^{\text{C}_3\text{H}_6}) \xrightarrow{^{\text{D}}_{\text{n}}} \circ \text{H}_{\text{N}_2} \circ (^{\text{C}_3\text{H}_6}) \xrightarrow{^{\text{D}}_{\text{n}}} \circ (^{\text{C}_3\text{H}_6}) \xrightarrow{^{\text{D}$$

CM 2

CRN 28961-43-5

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6

CCI PMS

PAGE 1-A

$$H_2C = CH - C - O = CH_2 - CH_2 - O = CH_2 - CH_2$$

PAGE 1-B

$$-CH_{2} - CH_{2} -$$

L90 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:292363 HCAPLUS

DN 139:37136

TI Fabrication of High Aspect Ratio Poly(ethylene glycol)-Containing Microstructures by UV Embossing

AU Chan-Park, Mary B.; Yan, Yehai; Neo, Wee Koon; Zhou, Wenxiu; Zhang, Jun; Yue, Chee Yoon

CS The Biological and Chemical Process Engineering Laboratory, The School of Mechanical and Production Engineering, Nanyang Technological University, Singapore, 639798, Singapore

SO Langmuir (2003), 19(10), 4371-4380 CODEN: LANGD5; ISSN: 0743-7463 PB American Chemical Society

DT Journal

LA English

The fabrication of high aspect ratio (5 and above) microstructures based upon UV embossing of mixts. containing poly(ethylene glycol) diacrylate (PEGDA) is described. UV embossing is a quick and convenient replication technique using low pressure and room temperature The biocompatibility and cell- and protein-resistance of PEGDA make deep three-dimensional (3-D) micropatterned PEGDA films potentially useful for many biol. applications such as protein delivery, tissue engineering, drug delivery, and biosensors. Microarrays of deep microchannels and microcups separated by PEGDA walls with aspect ratios of 7 and 5, resp., were successfully embossed. UV embossing was found to faithfully replicate the lateral periodicity and height of the mold. We also successfully UV embossed a mixture having equal weight proportions of hydrophilic PEGDA and hydrophobic poly(propylene glycol) diacrylate and demonstrated the use of this microarray of microcups for encapsulation of a model protein (bovine serum albumin) within a UV cured PEGDA hydrogel; a protein encapsulated within a hydrogel 3-D microarray was fabricated. Although high aspect ratio UV embossing has many attractive features, it is a difficult process to implement, requiring precise control and optimization of mold, process, and material parameters. Successful high aspect ratio UV embossing was achieved using two molds: a rigid nickel mold and a silicone rubber mold. The latter did not require any surface treatment, but the nickel mold was found to require coating with a cured silicone resin to obtain a suitable nonstick surface. The UV exposure time was controlled to optimize the hardened resin strength while avoiding excessive brittleness. Peel-off of the hardened microstructures was performed at a small angle to avoid breakage of the molded structures. A mold release additive was necessary for successful demolding. Trimethylolpropane triacrylate, a high shrinkage monomer, also facilitated demolding.

IT 540475-04-5P

RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(fabrication of high aspect ratio polyethylene glycol-containing microstructures by UV embossing)

RN 540475-04-5 HCAPLUS

2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CN

CRN 52496-08-9

CMF (C3 H6 O)n C6 H6 O3

CCI IDS, PMS

$$H_2C = CH - C - O - (C_3H_6) - O - C - CH = CH_2$$

CM 2

CRN 26570-48-9 CMF (C2 H4 O)n C6 H6 O3 CCI PMS

$$H_2C = CH - C - CH_2 - CH_2$$

CM 3

CRN 15625-89-5 CMF C15 H20 O6

RETABLE

Referenced Author (RAU)	(RPY)	(RVL)	PG (RPG)	(RWK)	Referenced File
Bacher, W	11998		117	Microsyst Technol .	•
Bao, Z	11999		1895	- :	 HCAPLUS
Becker, H	12000		130	Sens Actuators, A: P	•
Bender, M			1233		
Blawas, A	11998		1595	Biomaterials	HCAPLUS
Brandrup, J	11999	1	İ	Polymer Handbook	i ,
Bryant, S	12001	22	619		HCAPLUS
Bryant, S	12000	15	439	J Biomater Sci, Poly	i .
Calixto, S	1999	18	129	Eur Phys J: Appl Phy	HCAPLUS
Chou, S	1995	67	3114		HCAPLUS
Chou, S	1996		85		HCAPLUS
Colburn, M			2162		HCAPLUS
Desai, N			829	J Biomed Mater Res	HCAPLUS
Eldada, L	12000		54	IEEE J Sel Top Quant	HCAPLUS
Elisseeff, J	12000	51	164	J Biomed Mater Res	HCAPLUS
Gale, M	1997	i	Ι.	Micro-Optics:Element	
Gale, M	1997		321		HCAPLUS
Gaspar, S			4254		HCAPLUS
Goessl, A				J Biomater Sci Polym	
Haisma, J			4124		HCAPLUS
Halik, M	12002		289	Appl Phys Lett	HCAPLUS
Harvey, T		3099		Proc SPIE	1
Ichimura, K	1987		1763		HCAPLUS
Imai, K			1721	Biotechnol Bioeng	HCAPLUS
Jaszewski, R			301		HCAPLUS
Jiang, X	12002			-	HCAPLUS
Koh, W		118	2459		HCAPLUS
Lebib, A	1999	46	319	Microelectron Eng	1

```
Lee, J
                        |1989 |23
                                     |351
                                            | J Biomed Mater Res | HCAPLUS
Lee, K
                        |1995 |13
                                     |3012
                                            | J Vac Sci Technol, B| HCAPLUS
Leewis, C
                        |2001 |181
                                    1367
                                            |Nucl Instrum Methods | HCAPLUS
Liu, V
                        12002 160
                                     1126
                                            | J Biomed Mater Res | HCAPLUS
Madou, M
                        |1997 |
                                            |Fundamentals of Micr|
                        |2001 |22
Mellott, M
                                    1929
                                            |Biomaterials
                                                                  IHCAPLUS
Michel, B
                        |2001 |45
                                    |697
                                            |IBM J Res Dev
                                                                  | HCAPLUS
Minnema, L
                        |1988 |28
                                    |815
                                            |Polym Eng Sci
                                                                  | HCAPLUS
Ostuni, E
                        |2000 |16
                                    7811
                                            |Langmuir
                                                                  | HCAPLUS
Otto, M
                        |2001 |57
                                    |361
                                            |Microelectron Eng
Pugmire, D
                        |2002 |74
                                    871
                                            |Anal Chem
                                                                  | HCAPLUS
Revzin, A
                        |2001 |17
                                    15440
                                            |Langmuir
                                                                  | HCAPLUS
Santini, J
                        12000 139
                                    12396
                                            |Angew Chem, Int Ed
                                                                  | HCAPLUS
Sawhney, A
                        |1993 |26
                                     1581
                                            |Macromolecules
                                                                  HCAPLUS
Schadt, M
                        |2001 |364
                                    1151
                                            |Mol Cryst Liq Cryst | HCAPLUS
Shvartsman, F
                       |1991 |1461 |313
                                            |Proc SPIE
                                                                  | HCAPLUS
                       |1991 |1507 |383
Shvartsman, F
                                            |Proc SPIE
                                            | Jpn J Appl Phys, Par|
Tada, K
                        |1999 |38
                                    11143
Ward, J
                        |2001 |56
                                     1351
                                            | J Biomed Mater Res
                                                                  HCAPLUS
Wen, M
                        12002 135
                                    1112
                                            |Macromolecules
                                                                  IHCAPLUS
Xia, Y
                        |1998 |37
                                     1550
                                            |Angew Chem, Int Ed
                                                                  HCAPLUS
Xia, Y
                        |1995 |117
                                    19576
                                           | J Am Chem Soc
                                                                  | HCAPLUS
Zee, F
                        |2001 |72
                                     |120
                                            |Sens Actuators, B: C|
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L90 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:756072 HCAPLUS

DN 138:160971

- TI Synthesis and characterization of poly(methyl methacrylate-methacrylic acid) for a UV-sensitive aqueous base developable lithographic plate
- AU Kiatkamjornwong, Suda; Tessiri, Suteera
- CS Department of Imaging and Printing Technology, Faculty of Science, Chulalongkorn University, Bangkok, 10330, Thailand
- SO Journal of Applied Polymer Science (2002), 86(8), 1829-1837 CODEN: JAPNAB, ISSN: 0021-8995
- PB John Wiley & Sons, Inc.
- DT Journal
- LA English
- AB Syntheses of the copolymers of Me methacrylate and methacrylic acid were carried out by free radical chain polymerization in the presence of benzoyl peroxide (BPO) as an initiator. The effects of the monomer ratio and polymerization time on the averaged mol. wts., polydispersity index, and glass transition temperature were investigated. FTIR and NMR were used for functional

group characterization, GPC for average mol. wts. and the distribution, elemental anal. for CHO content, and DSC for the glass transition temperature The copolymers were mixed with tripropylene glycol diacrylate (TPGDA) and trimethylol propane ethoxylated triacrylate (TMPEOTA), 2-hydroxy-2-methyl-1-phenyl-propan-1-one (Darocur 1173) and benzophenone (Darocur BP) with anthraquinone for visibility of images. The photosensitive coating was spin-coated onto the anodized aluminum plate on which a thin film was formed. The wet film was then coated with PVA solution as an oxygen barrier layer. The plate assembled with a control wedge and a black color separation film was exposed to UV radiation at different exposure times. The plate was developed in a dilute alkaline developer. The resulting plate was evaluated for its reproduction properties in terms of surface properties (hydrophilic/hydrophobicity) by contact angle measurement of image/nonimage areas, resolution by microline, tone reproduction, and adhesion tests. The article describes the results of the syntheses, characterizations, and uses of the copolymer as a binder of a neq., lithog. printing plate. The present lithog. printing plate is good for a

medium viscosity printing ink to produce medium printing quality on uncoated paper.

IT 181260-01-5

RL: DEV (Device component use); PRP (Properties); USES (Uses) (imaging characteristics of lithog. printing plates prepared with photoimaging coating containing Me methacrylate-methacrylic acid copolymer binder)

RN 181260-01-5 HCAPLUS

CN 2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy][poly(oxy-1,2-ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

3 (D1-Me)

CM 2

CRN 28961-43-5 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CCI PMS

PAGE 1-A

PAGE 1-B

$$-CH_{2} \xrightarrow{n} O \xrightarrow{O} C - CH = CH_{2}$$

$$-CH_{2} \xrightarrow{n} O \xrightarrow{C} CH = CH_{2}$$

RETABLE

Referenced Author (RAU)	Year		Referenced File
	=+====+====+====	===+===================================	=+========
Andrews, R	11999	32 Polymer Handbook	1
Chandross, E	11987	US 4666820	HCAPLUS
Dietliker, K	1991 3 70	Photoinitiators for	:
Dufour, P	1991 4 34	Formulation	i .
Fouassier, J	1991 2 245	Photoinitiating Sys	stĺ
Greenley, R	1999 VI20		İ
Kamachi, M	1999 1182	_	İ
Odian, G	1991 215	Principles of Polym	ne l
Odian, G		Principles of Polym	
Ueda, A		100 Polymer Handbook	i

L90 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:503742 HCAPLUS

DN . 137:64615

TI Radiation-curable composition for abrasion-resistant coating

IN Muratake, Hiroaki

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	· APPLICATION NO.	DATE
PΙ	JP 2002188014	A2	20020705	JP 2000-385134	20001219 <
PRAI	JP 2000-385134		20001219	<	

The composition contains a radiation-curable compound, inorg. particles, and a fibrous material, which provide abrasion-resistant coating on a paper, plastic, glass, or metal substrate. Thus, poly(ethylene oxide) trimethylolpropane ether triacrylate (ETA 300) 75, tripropylene glycol diacrylate (KS TPGDA) 25, powdered Al2O3 (WA 500) 20, and ceramic fiber (RF 200/99) 4 parts were mixed, applied on a paper sheet, and electron beam-irradiated in N to give a cured coating showing good Taber abrasion resistance.

IT 181260-01-5P, Ethoxylated trimethylolpropane triacrylatetripropylene glycol diacrylate copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
 (radiation-curable resin coating containing inorg. particles and fibers with abrasion resistance)

RN 181260-01-5 HCAPLUS

CN 2-Propenoic acid, (1-methyl-1, 2-ethanediyl) bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy][poly(oxy-

1,2-ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

3 (D1-Me)

CM 2

CRN 28961-43-5

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6

CCI PMS

PAGE 1-A

PAGE 1-B

L90 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:554868 HCAPLUS

DN 135:138793

 ${\tt TI}$ UV-curable protective film compositions for optical recording media and media therefrom

IN Shoji, Toshihiro

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent LA Japanese

FAN.CNT 1

	PATENT NO.	KIND DAT	E APPLICATION NO.	DATE
PI	JP 2001207085		10731 JP 2000-20056	20000128 <
	US 2001017819 US 6924017		10830 US 2001-768178 50802	20010124 <
	EP 1120447	A1 200	10801 EP 2001-101618	20010125 <
	EP 1120447	B1 200!	50928 FR GR GR TT II III NI	CF MC DT

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, . IE, SI, LT, LV, FI, RO

PRAI JP 2000-20056 A 20000128 <--

Title compns., useful for Ag (alloy)-based reflective film-containing recording media, are characterized with a pH value (A1) of 1% MeOH solution of 4.5-6.8. A composition containing trimethylolpropane triacrylate, ethoxylated

trimethylolpropane triacrylate, tripropylene glycol diacrylate, initiators, and a surfactant showed Al of 6.4 and was used to form a compact disk showing CI error 2.0 counts/s initially and 10.0 counts/s after 100 h at 80° and 80% relative humidity.

ΙT 351878-28-9P

> RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (UV-curable acrylic coatings with controlled pH value for Ag (alloy) reflective film-containing optical recording media)

RN 351878-28-9 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3propanedlyl ester, polymer with α -hydro- ω -[(1-oxo-2propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1ethanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5 CMF C15 H24 O6

CCI IDS

3 (D1-Me)

CM 2

CRN 28961-43-5

(C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CMF

CCI

PAGE 1-A

$$H_2C = CH - C - O - CH_2 - CH_2 - O - CH_2$$

PAGE 1-B

CM 3

CRN 15625-89-5 CMF C15 H20 O6

L90 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:451291 HCAPLUS

DN 135:63758

TI Polymer electrolyte elements, manufacture of the elements and rolls of the elements, the polymer electrolyte element rolls, and manufacture of batteries

IN Amanokura, Hitoshi; Sonobe, Hiroyuki; Uehara, Hideaki; Saito, Masayasu

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001167638 PRAI JP 1999-348915	A2	20010622 19991208	JP 1999-348915	19991208 <

jan delaval - 16 november 2006

AB The electrolyte elements have a dried reaction layer of a reactive resin on a support, and are prepared by applying the resin on the support and drying when necessary. Preferably, the reactive resin contains a resin having weight average mol. weight 1000-3,000,000, a ethylenic unsatd. photopolymerizable component, and a photopolymn. initiator. The polymer electrolyte element rolls are prepared by rolling the elements. The batteries are prepared by laminating the polymer electrolyte element, with battery electrodes with the reaction layer in compact with the cathode or anode.

IT 345663-88-9P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(compns. and manufacture of polymer electrolyte components for secondary lithium batteries)

RN 345663-88-9 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]-, polymer with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) and α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 52496-08-9 CMF (C3 H6 O)n C6 H6 O3 CCI IDS, PMS

$$H_2C = CH - C - CH = CH_2$$

CM 2

CRN 28961-43-5 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CCI PMS

PAGE 1-A

PAGE 1-B

$$-CH_{2}$$
 $-CH_{2}$ $-CH_$

CM 3

CRN 25322-68-3 CMF (C2 H4 O)n H2 O CCI PMS

$$HO - CH_2 - CH_2 - O - H$$

L90 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:781058 HCAPLUS

DN 133:336291

TI Optical polarizing laminates having diffraction elements

IN Ishimura, Ryo

PA Nisseki Mitsubishi K. K., Japan

50 Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 3

271111		T NO.		KIND		DATE	API	PLICATION NO.		DATE	
	WO 20	00031071 00006538	_	A2 A1		20001107 20001102		1999-118676 2000-JP2587		19990426 20000420	
•	R	RW: CH,	DE, FI,	FR,	GB,				•		
		00211065 875481	1	A1 B2		20020815	US	2001-37215		20011019	<
PRAI	JP 19	99-1134		A		19990421	<				
		99-1185 99-1186		A A		19990426 19990426	<				
		99-1187		Α		19990426	<				
		99-1752 99-1752		A A		19990622 19990622	<				
		00-JP25		A1		20000420	<				

AB The laminates, useful for optical components, etc., comprise a support substrate, an adhesive layer, a cholesteric liquid crystal layer containing regions having diffraction functions, and a UV-absorbing hard-coating protective layer. Thus, a laminate comprising triacetylcellulose film, a photocurable acrylic adhesive layer, a gold reflective cholesteric liquid crystal layer of 50:20:20:10 terephthalic acid-hydroxybenzoic acid-catechol-(R)-2-methyl-1,4-butanediol copolymer (Tg 85°), which

was treated with a diffraction grating film to impart diffraction and polarizing functions, and a photocurable hard coating layer from acrylic adhesives (mixture of Aronix UV 3630, M 150, and M 315) containing a UV absorber

(Cyasorb UV 24) showed rainbow color derived from optical diffraction, selective reflection, and good wear resistance.

IT 304686-09-7P, Aronix M 240-Aronix M 320 copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(UV-absorbing hard coating layer; polarizing laminates containing cholesteric liquid crystal layers having diffraction functions and UV-absorbing hard coating layers)

RN 304686-09-7 HCAPLUS

CN 2-Propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer
with α-hydro-ω-[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 53879-54-2 CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C15 H2O O6 CCI IDS, PMS

PAGE 1-A

$$H_2C = CH - C - O = (C_3H_6) - O = D = CH_2 - C - Et$$
 $CH_2 = CH_2 - C - Et$
 $CH_2 = CH_2 - C - Et$
 $CH_2 = CH_2 - C - Et$

PAGE 1-B

$$-(c_3H_6)$$
 $-\frac{1}{n}$ 0 $-\frac{0}{c}$ $-cH$ $=cH_2$

CM 2

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

- CH= CH $_2$

L90 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:418045 HCAPLUS

DN 133:65978

TI Photosensitive resin composition, photosensitive element using same, resist pattern formation, and production of printed circuit board

IN Ichikawa, Tatsuya; Ohashi, Takeshi

PA Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000171971 PRAI JP 1998-345349 GI	A2	20000623 19981204	JP 1998-345349 <	19981204 <

$$H_{2}C = CCO(OX)_{pO} \xrightarrow{Z_{5}^{1}} CH_{3} \xrightarrow{Z_{5}^{2}} O(YO)_{q}COC = CH_{2}$$

AΒ The title resin composition contains (a) a CO2H-containing binder polymer, (b) photopolymg. compds. having ≥1 polymerizable ethylenic unsatd. bond in their mols. including compds. MeCH2[CH2CH2O(AO)m1(BO)n1COCR1:CH2][CCH2O (AO) m2 (BO) n2 COCR2 : CH2] [CH2 CH2 O (AO) m3 (BO) n3 COCR 3 : CH2] [R1-3 = H or Me; A,B = C2-6 alkylene (A \neq B); m1 + m2 + m3 = 6-45; n1 + n2 + n3 = 3-45) and I [R4, R5 = H or Me; X, Y = C2-6 alkylene; Z1, Z2 = halo, H, C1-20alkyl, C3-10 cycloalkyl, amino- or C1-20 alkyl-substituted aryl, amino, SH, C1-10 alkylmercapto, C1-10 alkyl-containing carboxyalkyl, C1-20 alkoxy, heterocycle-containing group; p + q = 8-40; s, t = 1-4] as essential components, and (c) a photopolymn. initiator. The photosensitive element comprises a support laminated with the composition and an optional protective film and is laminated on a substrate for forming a circuit while the protective film is being peeled off, if necessary, imagewise exposed to activating ray to photo-cure the exposed areas, and developed to remove the unexposed areas to form a resist pattern. The substrate on which a

resist pattern has been formed by the above process is subjected to etching or plating to give a printed circuit board. The composition shows high photosensitivity and provides high resolution resist patterns with high plating resistance, adhesivity, mech. strength, and flexibility.

IT 117989-76-1

RL: TEM (Technical or engineered material use); USES (Uses) (O 565; photoresist composition containing polymer with carboxy group, acrylate

compound, and photopolymn. initiator)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$CH_2-OH$$
 $HO-CH_2-C-Et$
 CH_2-OH

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



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L90
    ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
ΑN
     2000:188317 HCAPLUS
DN
     132:223876
ΤI
     Polyacrylate esters and their use as deaerating agents for lacquers and
IN
     Dietz, Thomas; Esselborn, Eberhard; Psiorz, Christian; Schick, Ute;
     Silber, Stefan; Wallhorn, Ellen; Wolfgram, Dirk
PA
    Th. Goldschmidt A.-G., Germany
SO
    Ger. Offen., 12 pp.
    CODEN: GWXXBX
DT
    Patent
LA
    German
FAN.CNT 1
    PATENT NO.
                       KIND
                               DATE
                                          APPLICATION NO.
                                           -----
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                               -----
PΙ
    DE 19841559
                        A1
                               20000323 DE 1998-19841559
                                                                19980911 <--
    EP 990665
                        A2
                                           EP 1999-117003
                               20000405
                                                                 19990828 <--
    EP 990665
                        A3
                               20000524
    EP 990665
                        В1
                               20031001
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO
    AT 251186
                         Ε
                               20031015
                                           AT 1999-117003
                                                                  19990828 <--
    CA 2281433
                         AA
                               20000311
                                           CA 1999-2281433
                                                                 19990907 <--
    US 6353068
                         В1
                               20020305
                                         US 1999-394441
                                                                  19990909 <--
PRAI DE 1998-19841559
                        Ą
                               19980911 <--
    The polyacrylates, of average mol. weight 1000-10,000, obtained by
    transesterification, contain residues formally derived from (a) C1-4-alkyl
    acrylates, (b) C12-22-alk(en)yl acrylates, and (c)
     (meth)acryloyloxyhydrocarbyl acrylates in molar ratio (10-50):(3-20):(1-
     10), where a/(b + c) = 0.25-4 and c/b \le 0.7. Thus, 193.3 g poly(Me
    acrylate) (Mw 3101), obtained by polymerization in toluene with AIBN as
initiator
    and n-dodecyl mercaptan as chain-transfer agent, was heated to
    100°/1 torr to remove solvent, then heated at 120°/15 torr
    with 187.9 g oleyl alc. and 3.92 g Bu2SnO with MeOH distillation, and finally
    heated at 50°/60 torr with 46.4 g 2-hydroxyethyl acrylate in the
    presence of methylhydroquinone as polymerization inhibitor to give a
polyacrylate
    with a:b:c = 7:7:2. A clear lacquer based on Laromer PO 84F containing 0.5%
    of the polyacrylate air-sprayed on a wooden board at 100 \mu m thickness
    and cured by UV irradiation showed a reduced content of air bubbles by visual
    observation and by gloss measurement.
    261629-46-3, Laromer 8863-OTA 480-TPGDA copolymer
    RL: POF (Polymer in formulation); TEM (Technical or engineered material
    use); USES (Uses)
        (lacquer binder; polyacrylate esters as deaerating agents for lacquers
       and paints)
RN
    261629-46-3 HCAPLUS
    2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]
CN
    ester, polymer with \alpha-hydro-\omega-[(1-oxo-2-propenyl)oxy]poly(oxy-
     1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)
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and $\alpha, \alpha', \alpha''-1, 2, 3$ -propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

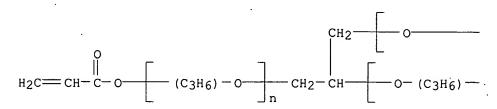
CM 1

CRN 52408-84-1

CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C12 H14 O6

CCI IDS, PMS

PAGE 1-A



PAGE 1-B

CM 2

CRN 42978-66-5 CMF C15 H24 O6

CCI IDS

3 (D1-Me)

CM 3

CRN 28961-43-5

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6

CCI PMS

PAGE 1-A

PAGE 1-B

$$-CH_{2} \xrightarrow{n} O - C - CH = CH_{2}$$

$$-CH_{2} \xrightarrow{n} O - C - CH = CH_{2}$$

RETABLE

Referenced Author (RAU)	j (ear (RPY)	(RVL)	(RPG)	İ	eferencec (RWK)		İ	Referenced File
Anon Anon	 	 	+====+ 		DE	3718588 4236337	C1	F	HCAPLUS HCAPLUS

L90 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:504973 HCAPLUS

DN 131:117642

TI Agents for treating wood

IN Gatenholm, Paul

PA Advanced Polymer Technology AB, Swed.

SO Swed., 12 pp.

CODEN: SSXXAY

DT Patent

LA Swedish

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SE 508575	C2	19981019	SE 1990-2302	19900629 <
	SE 9002302	Α	19911230		
PRAI	SE 1990-2302		19900629	<	

AB The agents, which penetrate the wood and polymerize in the wood to bring about dimensional stabilization of the wood, contain a multifunctional allyl ether and an acrylate- or methacrylate-terminated polyether and/or an acrylate- or methacrylate-terminated urethane prepolymer. These agents are environmentally safe, give good penetration, do not require heat or radiation for drying (polymerizing), and may be used in diluted and undild.

form,
and wood treated with the agents has good weather resistance. An agent
containing Santolink XI 100 [oxirane, [(2-propenyloxy)methyl]-, homopolymer,
ether with 1,2-ethanediol (2:1)] 20.0, Sartomer 344 (polyethyleneglycol

400 diacrylate) 80.0, and containing Nuocure CK (Co-K complex; drier) 0.3, and

benzoylperoxide 1.0 g, had shelf life 1-8 h and gave penetration 3 mm. ΙT 232611-84-6, Novamer TPGDA-TP 30 copolymer RL: FMU (Formation, unclassified); TEM (Technical or engineered material use); FORM (Formation, nonpreparative); USES (Uses) (for penetration and wood preservation)

RN 232611-84-6 HCAPLUS

CN 2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 50586-59-9

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C6 H14 O3

CCI

HO
$$CH_2-CH_2-O$$
 CH_2-CH_2 CH_2-CH_2 $O-CH_2-CH_2$ O

CM 2

CRN 42978-66-5 CMF C15 H24 O6

CCI IDS

3 (D1-Me)

L90 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

1999:322528 HCAPLUS AN

DN 131:37785

ΤI Photosensitive resin composition and photosensitive element using same

IN Ichikawa, Tatsuya; Endo, Masaki

PΑ Hitachi Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DTPatent

LA Japanese

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE _____ PΙ JP 11133595 A2 19990521 JP 1997-294510 19971027 <--

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PRAI JP 1997-294510
                                19971027 <--
AB
    The title resin composition comprises (a) a CO2H-containing binder polymer,
(b) a
     photopolymn. initiator, and (c) photopolymg. unsatd. compds. having
     ≥1 polymerizable ethylenic unsatd. bond in their mol. including
     5-70 weight% of compound EtC[CH2O(AO)m1(BO)n1COCR1:CH2][CH2O(AO)m2(BO)n2COCR2:C
     H2] [CH2O(AO) m3(BO) n3COCR3:CH2] (R1- 3 = H or Me; A, B = CHMeCH2, CH2CHMe,
     CH2CH2, A \neq B; m1 + m2 + m3 = 6-45; n1 + n2 + n3 = 3-45). The
     photosensitive element comprises a support coated with the composition The
     composition useful as a resist suited for use in production of printed circuit
     boards shows improved plating resistance and peeling properties.
IT
     117989-76-1
     RL: TEM (Technical or engineered material use); USES (Uses)
        (photoresist containing binder polymer with carboxyl group, photopolymn.
        initiator, and ethylenic unsaturate photopolymerizable compound)
RN
     117989-76-1 HCAPLUS
CN
     Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-
     (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX
     NAME)
     CM
          1
         79-10-7
     CRN
     CMF C3 H4 O2
HO- C- CH= CH2
     CM
          2
     CRN
         77-99-6
     CMF C6 H14 O3
        CH2-OH
HO-CH2-C-Et
        CH2-OH
     CM
          3
     CRN
          9003-11-6
     CMF
          (C3 H6 O . C2 H4 O) x
     CCI
          PMS
               4
          CM
```

CRN

75-56-9 CMF C3 H6 O

СНЗ

CM 5

CRN 75-21-8 CMF C2 H4 O

0

L90 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:483305 HCAPLUS

DN 127:111220

TI Secondary nonaqueous batteries using polymer containing gelled electrolytes

IN Matsui, Toru; Takeyama, Kenichi

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09147912 JP 3312836	A2 B2	19970606	JP 1995-309391	19951128 <
PRAI JP 1995-309391 GI		19951128	<	

 $CH_2O(CH_2CH_2O)_mCOCH = CH_2$ $CH_3CH_2C - CH_2O(CH_2CH_2O)_mCOCH = CH_2$ $CH_2O(CH_2CH_2O)_mCOCH = CH_2$

 $\begin{array}{c} \text{Me} \\ | \\ \text{CH}_2 = \text{CHCO (OCH}_2\text{CH}_2)_2 (\text{OCHCH}_2)_n - \\ - (\text{OCH}_2\text{CH}_2)_2 \text{OCOCH} = \text{CH}_2 \quad \text{II} \end{array}$

O |I| $CH_2 = CHCO_2 (RO - C - O)_1 ROCOCH = CH_2 TITE$

AB The batteries use gelled alkali metal ion conductive electrolyte containing a

jan delaval - 16 november 2006

matrix of a copolymer of I (m = an integer) and II (n = an integer) or I and III (R = (CH2)s or [(CH2)kO(CH2)k]t; s, k, l, t are integers). These electrolytes have good interfacial property a the anode side and render the batteries long cycle life.

192189-34-7P

IT

RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process); USES (Uses)

(acrylate copolymer matrixes for gelled electrolytes in lithium batteries)

RN 192189-34-7 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, di-2-propenoate, block, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 28961-43-5 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CCI PMS

PAGE 1-A

$$H_2C = CH - C - O = CH_2 - CH_2 - O = CH_2 - CH_2 - C - Et$$
 $CH_2 = CH_2 - CH_2 - CH_2 - C - Et$
 $CH_2 = CH_2 - CH_2 - CH_2 - C - CH_2 - CH$

PAGE 1-B

$$-CH_{2} \xrightarrow{n} O \xrightarrow{C} CH = CH_{2}$$

$$-CH_{2} \xrightarrow{n} O \xrightarrow{C} CH = CH_{2}$$

CM 2

CRN 146702-30-9 CMF (C3 H6 O . C2 H4 O)x . 2 C3 H4 O2

CM 3

CRN 79-10-7 CMF C3 H4 O2

106392-12-5 CRN

CMF (C3 H6 O . C2 H4 O)x

CCI 'PMS

5 CM

CRN 75-56-9 CMF C3 H6 O



CM 6

75-21-8 CRN CMF C2 H4 O



L90 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:479241 HCAPLUS

DN 127:97521

ΤI Flat non-aqueous electrolyte secondary battery with polymer coated anode

Matsui, Tooru; Takeyama, Kenichi IN

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

English LA

FAN.	CNT I	MIND	DAME	ADDITORMION NO	האשה
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	EP 777287	A2	19970604	EP 1996-117858	19961107 <
	EP 777287	A3	19970716	•	
	EP 777287	B1	20000202		
	R: BE, DE, FR,	GB, IT			
	JP 09147920	A2	19970606	JP 1995-309381	19951128 <
	JP 3394125	₿2	20030407		
	US 5773166	Α	19980630	US 1996-756778	19961126 <
PRAI	JP 1995-309381	Α	19951128	<	

AΒ The flat non-aqueous electrolyte secondary battery has an anode containing an alkali metal (e.g., lithium) active material, where the anode is coated with a polymer film containing dissociated alkali metal ions, supporting a gel electrolyte. The polymer film is made of a polymeric monomer which has

mol. weight/terminal polymer functional group number of ≤ 500 , and a alkoxylated polyol acrylate structure where the alkoxylated chains are formed by random or block polymerization of ethylene oxide and/or propylene oxide.

IT 117989-76-1

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(flat non-aqueous electrolyte secondary alkali metal battery with polymer coated anode)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ \vdots \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



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L90 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
AN
    1997:369593 HCAPLUS
DN
    126:344211
    Continuous process for the preparation of highly stable, finely divided,
TΙ
    low viscosity polymer polyols of small average particle size
IN
    Kratz, Mark R.; Dietrich, Manfred; Heinemann, Torsten; Jacobs, Gundolf;
    Sanders, Josef; Woynar, Helmut
PA
    Bayer A.-G., Germany
SO
    Eur. Pat. Appl., 14 pp.
    CODEN: EPXXDW
DT
    Patent
    English
LA
FAN.CNT 1
    PATENT NO:
                        KIND
                               DATE
                                        APPLICATION NO.
                                                                DATE
    -----
                        ----
                              _____
                                          -----
                                                                 _____
PΙ
    EP 768324
                        A1
                               19970416
                                        EP 1995-115940
                                                                19951010 <--
    EP 768324
                        В1
                               20000816
        R: BE, DE, ES, FR, GB, IT, NL
    ES 2148397
                        Т3
                               20001016
                                          ES 1995-115940
                                                                19951010 <---
    US 5814699
                        Α
                               19980929
                                          US 1996-723659
                                                                19961003 <--
    CA 2187125
                        AA
                               19970411
                                          CA 1996-2187125
                                                                19961004 <--
    JP 09124750
                        A2
                              19970513
                                          JP 1996-285938
                                                                19961009 <--
    BR 9605032
                        Α
                              19980630
                                          BR 1996-5032
                                                                19961009 <--
    CN 1160061
                        Α
                               19970924
                                          CN 1996-112759
                                                                19961010 <--
    CN 1069654
                        В
                               20010815
PRAI EP 1995-115940
                        Α
                              19951010 <--
OS
    MARPAT 126:344211
AB
    Highly stable, finely divided, low viscosity polymer polyols of small average
    particle size, useful for preparation of polyurethane foams, are manufacture
by 1st
    reacting (1) a mixture of styrene and acrylonitrile (I) in a mixture of (2) a
    polyoxyalkylene polyether polyol and (3) a macromer in the presence of (4)
    a free radical initiator, (5) a solvent having moderate chain transfer
    activity and optionally (6) a reaction moderator at a temperature of
    ≥100° to give a seed with macromer content ≥12% with
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with I but optionally in the presence of a macromer. A typical macromer was manufactured by reaction of ethylene oxide-propylene oxide copolymer trimethylolpropane ether with maleic anhydride and subsequently with ethylene oxide.

respect to the polyol mixture and the solids content 15-30%, and then using the seed in further stirred-tank reactors for a similar polymerization of

IT 118800-30-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(macromer; continuous manufacture of highly stable, finely divided, low viscosity polymer polyols of small average particle size from macromers for polyurethane foams)

RN 118800-30-9 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), 2-propenoate (9CI) (CA INDEX NAME)

CM 1 CRN 79-10-7

CMF C3 H4 O2

о || но-с-сн==сн₂

CM 2

CRN 77-99-6 CMF C6 H14 O3

CH2-OH HO-CH2-C-Et CH2-OH

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

'CM 4

CRN 75-56-9 CMF C3 H6 O

CH3

CM 5

CRN 75-21-8 CMF C2 H4 O

 $^{\circ}$

L90 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:580576 HCAPLUS

DN 125:302320

TI Low viscosity polymer polyols, a process for their production, and

manufacture of polyurethane from materials

IN Sanders, Josef; Kratz, Mark; Dietrich, Manfred; Heinemann, Torsten; Woynar, Helmut; Jacobs, Gundolf; Scholz, Uwe

PA Bayer Aktiengesellschaft, Germany.

SO U.S., 10 pp. CODEN: USXXAM

DT Patent

LA English FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
 US 5554662 DE 1995-19508578 MARPAT 125:302320	A A	19960910 19950310	US 1995-470695	19950606 <

AB Stable, agglomerate-free, low viscosity graft copolymer dispersions are produced by radical polymerization of ethylenically unsatd. monomers in the presence of a base polyol, a macromer, an enol ether chain-transfer agent A=CHOR (A is I; R is a C1-18 aliphatic hydrocarbon radical, a C5-10 cycloaliph. hydrocarbon radical, or a (substituted) benzyl radical; R' is H or a C1-8 aliphatic hydrocarbon radical), and optionally, an organic solvent. Acrylonitrile and styrene were polymerized with ethylene trimethylolpropaneinitiated oxide-propylene oxide copolymer acrylate macromer in the presence of cyclohex-3-enylidene-cyclohexyl ether to give a graft copolymer which was used in manufacture of a polyurethane foam. IT 118800-30-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(low viscosity polymer polyols, a process for their production, and manufacture

of polyurethane from materials)

RN 118800-30-9 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), 2-propenoate (9CI) (CA INDEX NAME)

CM

CRN 79-10-7 CMF C3 H4 O2

CM 2 CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} & \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:577028 HCAPLUS

DN 125:198103

TI Scratch-resistant antistatic plastic films or sheets and their manufacture

IN Yamakido, Masayoshi; Ihira, Makoto; Araki, Mineo

PA Takiron Co, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

FAN	CNT I	•			
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 08169967	A2	19960702	JP 1994-334814	19941219 <
	JP 3503035	B2	20040302		

PRAI JP 1994-334814 19941219 <--

AB Title films or sheets are prepared by dispersing elec. conductive polyaniline in multifunctional acrylate monomer solns., coating one or two sides of plastic films or sheets with the dispersions, and curing the

acrylates by electron beam irradiation and optionally laminating the films as the outer layer with plastic sheets. Thus, 100 parts Aronix M 350 (ethoxylated trimethylolpropane triacrylate) was mixed with 10 parts Versicon (polyaniline), applied onto poly(Me methacrylate) film on one side, and cured by electron beam irradiation at 2 Mrad doses to form an antistatic film. PVC was sandwiched between two of the film and hot pressed to give an antistatic sheet exhibiting surface resistivity 2.4 x $106~\Omega$ initially and 3.7 x $106~\Omega$ after abrading the surface for 100 cycles at load 250 g using a Taber abrader , light transmittance 37.4% initially and 37.4% after the abrasion test, and haze 20.5% initially and 28.3% after the abrasion test.

IT 181260-01-5P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(coating, containing polyaniline; for manufacture of scratch-resistant antistatic plastic films or sheets)

RN 181260-01-5 HCAPLUS

2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with α -hydro- ω -[(1-oxo-2-propenyl)oxy][poly(oxy-1,2-ethanediyl)] ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CN

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

3 (D1-Me)

CM 2

CRN 28961-43-5 CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C15 H2O O6 CCI PMS

PAGE 1-A

$$H_2C = CH - C - O - CH_2 - C$$

PAGE 1-B

L90 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:808429 HCAPLUS

DN 123:270912

TI Liquid crystal/prepolymer compositions and liquid-crystal display devices using them

IN Takiguchi, Yasuyuki; Kanemoto, Akihiko; Matsuki, Yumi

PA Ricoh Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 07175051	A2	19950714	JP 1994-82301	19940329 <
	US 5496497	Α	19960305	US 1994-220699	19940331 <
PRAI	JP 1993-97182	Α	19930331	<	
	JP 1993-298888	Α .	19931104	<	

AB The compns. contain a prepolymer composition, which mainly comprises bifunctional acrylates having 2 double bonds with HLB value 3.5-11 and monofunctional acrylates having 1 double bond with HLB value 2.5-7.0, a polymerization initiator, and a liquid crystal and in which phase separation between the

liquid crystal and the polymer is induced by polymerization. The liquid-crystal display devices comprise a pair of substrates, between which the liquid crystal/polymer phase-separated structure formed by polymerization of the above

crystal/polymer phase-separated structure formed by polymerization of the above compns. is supported. The display devices are capable of being driven at low voltage and show sharp threshold characteristics, low hysteresis, high-speed response, and high charge retention.

IT 169122-13-8P

RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (liquid-crystal/prepolymer compns. containing HLB-controlled mono- and diacrylates for polymer-dispersed liquid-crystal display devices)

RN 169122-13-8 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α -(1-oxo-2-propenyl)- ω -(dodecyloxy)poly(oxy-1,2-ethanediyl) and α -(1-oxo-2-propenyl)- ω -[(1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 52496-08-9

CMF (C3 H6 O)n C6 H6 O3

CCI IDS, PMS

$$H_2C = CH - C - CH = CH_2$$

CRN 39927-09-8

CMF (C2 H4 O)n C15 H28 O2

CCI PMS

Me-
$$(CH_2)_{11}$$
-O- CH_2 - CH_2 -O- n C - CH - CH_2

CM 3

CRN 15625-89-5 CMF C15 H20 O6

L90 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:235144 HCAPLUS

DN 122:147331

TI Photosensitive resin composition and photosensitive element

IN Sawabe, Masaru; Ishimaru, Toshiaki

PA Hitachi Chemical Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA . Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 06242603	A2	19940902	JP 1993-25691	19930215 <
	JP _. 2002328469	A2	20021115	JP 2002-18913	19930215 <
	JP 3437179	B2	20030818		
PRAI	JP 1993-25691	A3	19930215	<	

AB The composition comprises (1) an ethylenic unsatd. compound having ≥ 3 unsatd. groups O(R3O)n(R2O)nCOCR1:CH2 (R1 = H, Me; R2-3 = ethylene, propylene, R2 \neq R3; m, n ≥ 1), (2) an organic halo compound, (3) a film-forming polymer, and (4) photopolymn. initiator that generates radicals by irradiation Photosensitive elements comprising substrates and the

photosensitive composition layer are claimed. The composition shows good flexibility, releasing property, and plating resistance, and prevents generation of scum.

IT 117989-76-1 161278-82-6

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist containing propoxy ethoxy acrylate and organic halo compound)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 . CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O

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^{\circ}
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RN 161278-82-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2(hydroxymethyl)-1,3-propanediol (3:1), tris(2-methyl-2-propenoate) (9CI)
(CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

$$\begin{array}{c} \text{CH}_2 \\ || \\ \text{Me-C-CO}_2 \text{H} \end{array}$$

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$_{\rm HO-CH_2-C-Et}^{\rm CH_2-OH}$$

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



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L90 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
    1995:227405 HCAPLUS
AN
DN
    122:92840
ΤI
    Crosslinking curable resin composition
IN
    Kushi, Kenji; Inukai, Kenichi; Iseki, Takayuki; Koyanagi, Seiya
PA
    Mitsubishi Rayon Co., Ltd., Japan
SO
    U.S., 13 pp.
    CODEN: USXXAM
DT
    Patent
LA
    English
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                     APPLICATION NO.
                                                         DATE
                                     -----
                     ----
    _____
                                                         _____
                   A
                          19941018 US 1992-950500
    US 5356754
PΙ
                                                         19920925 <--
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PRAI US 1992-950500 19920925 <-AB A photopolymerizable or radiation polymerizable alkaline developing crosslinking curable resin composition comprises: (a) 5-30 parts by weight of

at

용

least one compound possessing in one mol. on the average 1.5 or more (meth)acryloyloxy groups, which is obtained by reacting (meth)acrylic acid with a reaction product formed by adding, to a polyat. alc. possessing 3 or more OH groups in one mol., an alkylene oxide containing propylene oxide in an amount of 67% molar or greater in an amount of 5-12 mol per mol of OH group in the aforementioned polyat. alc., (b) 5-30 parts by weight of at least one crosslinkable monomer other than that stated above in (a) , possessing in one mol. 2 or more ethylenically unsatd. groups, (c) 45-75 parts by weight of a thermoplastic polymer for use as a binder, the thermoplastic polymer in turn being formed of 15-35 weight% of at least one α , β -unsatd. carboxyl group containing a monomer having 3-15 carbon atoms, and 65-85 weight

of another copolymerizable monomer, and (d) 0-10 parts by weight of a photopolymn. initiator. The composition possesses superior antiplating properties and a short stripping period, in which the stripped plate is not easily dissolved in the stripping fluid.

IT 118800-30-9P

RL: POF (Polymer in formulation); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(crosslinking curable resin composition)

RN 118800-30-9 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:334936 HCAPLUS

DN 120:334936

TI Novel (meth)acrylate for photoresists

IN Myazaki, Seiji; Myoshi, Takanori; Sonobe, Hiroshi; Koyanaqi, Seiya

PA Mitsubishi Rayon Co, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05125015	A2	19930521	JP 1991-289960	19911106 <
PRAI	JP 1991-289960		19911106	<	

AB The claimed acrylate is obtained by forming an adduct of alkylene oxides to a polyhydric alc., then esterifying; the polyhydric alc. containing ≥3 OH in 1 mol., the alkylene oxide being propylene oxide or its

mixture with ethylene oxide (propylene oxide ≥67 mol%), the addition amount of alkylene oxides to polyhydric alc. being average 5-12 mol/mol(OH),

and

there existing average ≥ 1.5 (meth)acrylate ester group in 1 mol.. The (meth)acrylate shows superior plating-resistance, easy peeling off property and low irritation to skin.

IT 118800-30-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and use of, as photoresist composition)

RN 118800-30-9 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8

CMF C2 H4 O



```
L90 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
    1993:683964 HCAPLUS
AN
DN
    119:283964
TΙ
    Solid electrolytes and their preparation
IN
    Kono, Michiyuki; Motogami, Kenji; Mori, Shigeo
PA
    Daiichi Kogyo Seiyaku Co., Ltd., Japan
SO
    Eur. Pat. Appl., 11 pp.
    CODEN: EPXXDW
DT
    Patent
LA
    English
FAN.CNT 1
    PATENT NO.
                        KIND
                               DATE
                                          APPLICATION NO.
                                                                DATE
    -----
                        ____
                               -----
                                          ------
                                                                 _____
    EP 537930
PΤ
                        A1
                              19930421
                                          EP 1992-309063
                                                                19921005 <--
    EP 537930
                        В1
                              19950524
        R: DE, FR, GB, NL
    JP 05109311
                              19930430
                        Α2
                                          JP 1991-296173
                                                                19911015 <--
    JP 2987474
                        В2
                              19991206
    US 5356553
                        Α
                              19941018
                                          US 1992-957258
                                                                19921006 <--
    CA 2080047
                        AA
                              19930416
                                          CA 1992-2080047
                                                                19921007 <--
    CA 2080047
                        С
                              19990302
PRAI JP 1991-296173
                        Α
                              19911015 <--
GΙ
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—
$$(CH_2CH_2O)_m$$
 — $(CH_2CHR'O)_n$ — C

AB The title electrolytes are prepared by dissolving a solvent and an electrolyte salt in a trifunctional terminal acryloyl-modified alkylene oxide polymer containing a polymer chain described by the general formula I (R' = a low mol. weight alkyl group; R'' = H or Me; m, or n = 0 or an integer ≥1; and m + n ≥35) and crosslinking it. The electrolytes are ion conductors and applications in cells, electrochromic displays, and sensors are indicated.

IT 115165-81-6P 118800-30-9P

RL: PREP (Preparation)

(preparation of, for electrolytes)

RN 115165-81-6 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

CRN 77-99-6 CMF C6 H14 O3

CM 3

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



RN 118800-30-9 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CRN 77-99-6 CMF C6 H14 O3

$${\rm CH_2-OH} \\ {\rm HO-CH_2-C-Et} \\ {\rm CH_2-OH} \\$$

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN 1993:675100 HCAPLUS ΑN DN 119:275100 ΤI Batteries with solid polymer electrolytes IN Kono, Michiyuki; Mori, Shigeo; Takeda, Kazunari; Izuti, Shyuiti PA Daiichi Kogyo Seiyaku Co., Ltd., Japan; Yuasa Corp. SO PCT Int. Appl., 29 pp. CODEN: PIXXD2 DT Patent LA Japanese

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FAN.CNT 1
    PATENT NO.
                       KIND
                              DATE
                                          APPLICATION NO.
                                                                DATE
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                        ____
                              _____
                                          _____
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    WO 9314529
PT
                              19930722
                                          WO 1993-JP64
                                                                19930120 <--
                        A1 .
        W: CA, US
        RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
    JP 05198303
                              19930806
                        A2
                                          JP 1992-31451
                                                                19920121 <--
    EP 576686
                        A1
                              19940105
                                          EP 1993-902505
                                                                19930120 <--
    EP 576686
                        В1
                              20011010
        R: DE, FR, GB
    JP 07006787
                        Α2
                              19950110
                                          JP 1993-26269
                                                                19930120 <--
    JP 3290229
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                              20020610
                        С
    CA 2106205
                              19991214
                                          CA 1993-2106205
                                                                19930120 <--
    US 5436090
                        Α
                              19950725
                                          US 1993-119214
                                                                19930921 <--
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19920121

19930120 <--

Α

W

AB The batteries use electrolytes obtained by crosslinking a mixture containing a trifunctional group polymer, an electrolyte salt, and a solvent by energy beam irradiation and/or heating; where the polymer contains 3 functional polymer chains of (CH2CH2O)m(CH2CRHO)nCOCR1:CH2 (R = C1-6 alkyl group, R1 = H or Me, m + n ≥35, and m or n may be 0), and the solvent is used at 220-950% the weight of the polymer. The batteries may use the electrolyte as separators and cathodes containing the electrolyte, or use anodes containing the electrolyte.

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IT 150604-34-5

PRAI JP 1992-31451

WO 1993-JP64

RL: USES (Uses)

(crosslinked, electrolyte containing lithium salts and solvents and, for batteries)

RN 150604-34-5 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2- (hydroxymethyl)-1,3-propanediol (3:1), tris(2-methyl-2-propenoate), block (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4 CMF C4 H6 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$CH_2-OH$$
 $HO-CH_2-C-Et$
 CH_2-OH

CM 3

106392-12-5 CRN (C3 H6 O . C2 H4 O) x CMF CCI PMS CM 4 CRN 75-56-9 CMF C3 H6 O



CM

75-21-8 CRN CMF C2 H4 O



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ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN
L90
    1993:451269 HCAPLUS
AN
DN
    119:51269
ΤI
    Prevention of discoloration of unfixed dyes by combustion exhaust gases in
    dyeing or printing fabrics with reactive dyes
IN
    Takekoshi, Shoji; Hashimoto, Akira; Tao, Kazuo
PA
    Meisei Chemical Works, Ltd., Japan
SO
    Jpn. Kokai Tokkyo Koho, 6 pp.
    CODEN: JKXXAF
DΤ
    Patent
LA
    Japanese
FAN.CNT 1
    PATENT NO.
                        KIND
                               DATE
                                          APPLICATION NO.
                                                                 DATE
    -----
                       ----
                              -----
                                          -----
                                                                 _____
ΡI
    JP 04333676
                        A2
                               19921120
                                          JP 1991-135446
                                                                19910510 <--
    JP 2549583
                        B2
                               19961030
PRAI JP 1991-135446
                               19910510 <--
    In the title process, cellulosic fabrics are dyed or printed with compns.
    0-10), CH2:CRCO2CH2CH(OH)CH2O(CH2CH2O)s(CH2CHMeO)pCH2CH(OH)CH2CO2CR:CH2,
    MeCH2C(CH2OX)3 [X = (CH2CH2O)s(CH2CHMeO)pCOCR:CH2], and/or YOCH2C(CH2OX)3
```

containing CH2:CRCO2(CH2CH2O)s(CH2CHMeO)pCOCR:CH2 (R = Me, H; s = 5-20; p = 5-20[Y = CH2:CRCO(CH2CH2O)s(CH2CHMeO)p]. A designed cotton broadcloth was dyed with a liquid containing polyoxyethylene dimethacrylate and Remazole Orange

3R, dried, contacted with nitrogen oxide (g), and heat treated to give a colored fabric without discoloration.

IT 117989-76-1

RL: USES (Uses)

(reactive dyeing solns. for cellulosic fabrics., for discoloration prevention)

RN 117989-76-1 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2(hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 77-99-6 CMF C6 H14 O3

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CM 3

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 4

CRN 75-56-9 CMF C3 H6 O



CM 5

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN AN 1993:410401 HCAPLUS

```
DN
     119:10401
ΤI
     Resist printing cellulosic fabrics with reactive dyes for sharp patterns
IN
     Takekoshi, Shoji; Hashimoto, Akira; Tao, Kazuo
PA
     Meisei Chemical Works, Ltd., Japan
SO
     Jpn. Kokai Tokkyo Koho, 5 pp.
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                    DATE
                                            -----
     JP 04343773
PΙ
                          A2
                                19921130
                                            JP 1991-141093
                                                                    19910515 <--
     JP 2652475
                          B2
                                19970910
PRAI JP 1991-141093
                                19910515
                                          <--
     In the title process, cellulosic fabrics are printed with compns. containing
     sulfurous acid salts, acidic sulfurous acid salts, and/or
     hydroxyalkanesulfonic acid salts as dye resist agents and subsequently
     printed with compns. containing reactive dyes containing vinyl sulfone groups,
and
     polyoxyalkylene (meth)acrylates with a specified structure as hollowing
     preventive agents. A cotton broadcloth was printed with a composition
containing
     Cibacron Red B and 3.0% Na2SO3, subsequently printed with a composition
containing
     Sumifix Brilliant Blue R and 2.0% polyoxyethylene diacrylate, and heat
     treated 8 min at 100^{\circ} to give a resist-printed fabric with a sharp
     pattern.
IT
     117989-76-1
     RL: USES (Uses)
        (resist printing compns. containing, for cotton fabrics, for sharp
        patterns)
     117989-76-1 HCAPLUS
RN
CN
     Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-
     (hydroxymethyl)-1,3-propanediol (3:1), tri-2-propenoate (9CI) (CA INDEX
     NAME)
     CM
          1
     CRN 79-10-7
     CMF C3 H4 O2
HO-C-CH=CH_2
```

$$\begin{array}{c} & \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$$

CRN

2

77-99-6

CMF C6 H14 O3

```
CM 3

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9

CMF C3 H6 O
```



CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN ΑN 1979:7044 HCAPLUS 90:7044 DN TΙ Stable suspensions of inorganic filler in organic polyhydroxyl compounds IN Von Bonin, Wulf PA Bayer A.-G., Fed. Rep. Ger. Ger. Offen., 44 pp. CODEN: GWXXBX DTPatent LA German FAN.CNT 2 PATENT NO. DATE KIND APPLICATION NO. DATE -----____ ---------------PΙ DE 2714291 A1 19781005 DE 1977-2714291 19770331 <--A A A1 A US 4207227 19800610 US 1977-856075 19771130 <--SE 7713638 19780604 SE 1977-13638 19771201 <--FR 2372851 19780630 FR 1977-36404 19771202 <--GB 1583457 19810128 GB 1977-50304 19771202 <--A2 JP 53071189 19780624 JP 1977-144639 19771203 <--ES 464700 A1 19781101 ES 1977-464700 19771205 <--A PRAI DE 1976-2654746 19761203 <--DE 1977-2714291 Α 19770331 <--AΒ The title compns., useful in polyurethane prepns., contain 0.5-80% inorg.

The title compns., useful in polyurethane prepns., contain 0.5-80% inorg. filler and 99.5-20% (cyclo)aliphatic polyol grafted with 0.01-35% unsatd. carboxylic acid and 0-25% comonomer (polyol CO2H content 0.005-15%). Thus, stirring polyethylene-polypropylene glycol trimethylolpropane ether (3:1) (I) (mol. weight 4800, primary OH content <3%) 200, styrene 10, acrylic acid 20, and tert-Bu peroxyoctanoate 0.5 part 4 h at 90° gave a clear, viscous graft polymer (II) [67184-04-7]. A suspension of 80 parts

CaCO3 (average particle size 3 $\mu)$ in 400 parts I and 52 parts II showed 0.5% settling in 15 days at 21°, compared with 65% in the absence of II. IT 67183-99-7 67184-01-4 RL: USES (Uses) (graft, dispersing agents, for suspensions of inorg. fillers in polyols) RN 67183-99-7 HCAPLUS CN 2-Propenoic acid, 2-methyl-, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and 2-propenoic acid (9CI) (CA INDEX NAME) CM CRN 79-41-4 CMF C4 H6 O2 CH₂ Me-C-CO2H CM 2 CRN 79-10-7 CMF C3 H4 O2 $HO-C-CH=CH_2$ CM 3 CRN 52624-57-4 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)xCM 4 CRN 77-99-6 CMF C6 H14 O3 сн2-он $HO-CH_2-C-Et$ сн2-он

> CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM

5

CRN 75-56-9 CMF C3 H6 O

СНЗ

CM 7

CRN 75-21-8 CMF C2 H4 O

 $\overset{\circ}{\triangle}$

RN 67184-01-4 HCAPLUS

CN 2-Propenoic acid, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7 CMF C3 H4 O2

о || но-с-сн==сн₂

CM 2

CRN 52624-57-4

CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 77-99-6 CMF C6 H14 O3

 $\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$

CM 4

CRN 9003-11-6 CMF (C3 H6 O . C2 H4 O)x CCI PMS

CM 5

CRN 75-56-9 CMF C3 H6 O



CM 6

CRN 75-21-8 CMF C2 H4 O



L90 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1978:511127 HCAPLUS

DN 89:111127

TI Stable suspensions of inorganic fillers in organic polyhydroxyl compounds

IN Von Bonin, Wulf

PA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 32 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

FAN.	FAN. CNT 2					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
ΡI	DE 2654746	A1	19780608	DE 1976-2654746	19761203 <	
	US 4207227	Α	19800610	US 1977-856075	19771130 <	
	SE 7713638	Α	19780604	SE 1977-13638	19771201 <	
	BE 861425	A1	19780602	BE 1977-183104	19771202 <	
	FR 2372851	A1	19780630	FR 1977-36404	19771202 <	
	GB 1583457	Α	19810128	GB 1977-50304	19771202 <	
	JP 53071189	A2	19780624	JP 1977-144639	19771203 <	
	ES 464700	A1	19781101	ES 1977-464700	19771205 <	
PRAI	DE 1976-2654746	Α	19761203	<		
	DE 1977-2714291	Α	19770331	<		

AB Polyols grafted with (meth)acrylic acid and, in some cases, other vinyl monomers were used to stabilize suspensions of inorg. fillers in polyols. These suspensions were useful for the manufacture of polyurethanes. Thus, a polyol (I) (mol. weight 4800) prepared from (HOCH2)3CEt, ethylene oxide, and propylene oxide was grafted (200 parts) with 10 parts styrene and 20 parts acrylic acid, and 52 parts graft copolymer was mixed with 400 parts I and 80 parts CaCO3 filler to prepared a stable suspension.

IT 67183-99-7 67184-01-4

RL: USES (Uses)

truong - 10 / 517042

(graft, for stabilization of polyol-filler suspensions for polyurethane manufacture)

RN 67183-99-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4

CMF C4 H6 O2

|| Me-C-CO₂H CM 2

> CRN 79-10-7 CMF C3 H4 O2

о || но-с-сн==сн₂

CM 3

CRN 52624-57-4 CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 4

CRN 77-99-6 CMF C6 H14 O3

CH2-OH HO-CH2-C-Et CH2-OH

CM 5

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

CM 6

CRN 75-56-9 CMF C3 H6 O СНЗ

CM 7

CRN 75-21-8 CMF C2 H4 O

 $\overset{\circ}{\triangle}$

CN

RN 67184-01-4 HCAPLUS

2-Propenoic acid, polymer with methyloxirane polymer with oxirane ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 7,9-10-7 CMF C3 H4 O2

но- с- сн<u>—</u> сн₂

CM 2

CRN 52624-57-4

CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O) \times

CM 3

CRN 77-99-6 CMF C6 H14 O3

 $\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{HO-CH}_2-\text{C-Et} \\ | \\ \text{CH}_2-\text{OH} \end{array}$

CM 4

CRN 9003-11-6

CMF (C3 H6 O . C2 H4 O) \times

CCI PMS

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CM 5
```

CRN 75-56-9 CMF C3 H6 O



CM 6

CRN 75-21-8 CMF C2 H4 O



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(FILE 'HOME' ENTERED AT 06:38:22 ON 16 NOV 2006) SET COST OFF

FILE 'HCAPLUS' ENTERED AT 06:38:40 ON 16 NOV 2006
L1 7 S US20050215752/PN OR (US2004-517042# OR WO2003-EP5953 OR DE200 SEL RN

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L2
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L3
              1 S L2 AND C6H14O3/MF
L4
          17006 S 77-99-6/CRN
L5
           1559 S L4 AND (79-10-7 OR 79-41-4)/CRN
L6
            215 S L5 AND C2H40
L7
            104 S L6 AND C3H6O
rs
             98 S L7 AND 75-21-8/CRN
L9
              0 S L7 AND 25322-68-3/CRN
L10
             97 S L8 AND 75-56-9/CRN
L11
             2 S L8 AND (31714-45-1 OR 25322-69-4)/CRN
L12
             98 S L10, L11
             6 S L7 NOT L12
L13
L14
             39 S L12 NOT C6/ES
L15
             36 S L14 NOT 56-81-5/CRN
L16
             34 S L15 NOT OC4-C6/ES
                SEL RN 4 5 8 9 14 17 18 25 27 29-31 33
L17'
             13 S E76-E88
L18
             21 S L16 NOT L17
L19
             16 S L2 AND L4
L20
              6 S L19 NOT L18
                SAV L18 TRUONG517/A
L21
                STR
L22
             50 S L21
L23
          35943 S L21 FUL
L24
                STR
L25
             50 S L24 SAM SUB=L23
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L26
          15579 S L24 FUL SUB=L23
            499 S L26 AND (75-21-8 OR 25322-68-3)/CRN
L27
L28
           2681 S L26 AND C2H4O
L29
           2681 S L27, L28
L30
            266 S L29 AND (75-56-9 OR 31714-45-1 OR 25322-69-4)/CRN
L31
            431 S L29 AND C3H60
            431 S L30, L31
L32
            154 S L32 NOT (C6 OR OC4-C6)/ES
L33
L34
            117 S L33 NOT L12
L35
            111 S L34 NOT OC4/ES
L36
             39 S L35 AND (N OR S OR SI OR P)/ELS
             72 S L35 NOT L36
L37
L38
             70 S L37 NOT 56-81-5/CRN
L39
             65 S L38 NOT C4H4O4
             34 S L39 NOT (UNSPECIFIED OR C5-C6-C6-C6/ES)
L40
L41
              6 S L40 AND NR>=3
L42
             28 S L40 NOT L41
                SEL RN 2 4-9 11 16 18 19 21 23-28
L43
             10 S L42 NOT E89-E106
L44
                STR L24
L45
             50 S L44 SAM SUB=L26
L46
                STR L44
L47
             50 S L46 CSS SAM SUB=L26
L48
                SCR 1992 OR 2021 OR 2016 OR 2026 OR 1852 OR 1855 OR 1867
L49
             50 S L46 NOT L48 CSS SAM SUB=L26
L50
           1830 S L46 NOT L48 CSS FUL SUB=L26
L51
           1762 S L50 NOT (C6-C6 OR C5-C6 OR OC4-C6)/ES
L52
            524 S L51 AND L29 NOT L32
L53
            336 S L52 NOT UNSPECIFIED
L54
              0 S L53 AND: (C2H4O AND C3H6O)
L55
                STR L46
L56
             21 S L55 CSS SAM SUB=L50
L57
            427 S L55 CSS FUL SUB=L50
L58
            135 S L57 AND (C2H4O OR C3H6O)
L59
             24 S L58 AND NR>=2
L60
              3 S L59 AND C15H24O6 NOT UNSPECIFIED
                SEL RN 1
L61
              1 S E107
L62
            111 S L58 NOT L59
L63
             57 S L62 NOT UNSPECIFIED
                SEL RN 5 15 19 30 32 34 48
L64
              7 S E108-E114
L65
             37 S L18, L43, L61, L64
L66
             47 S L2 AND PMS/CI
L67
             37 S L66 NOT L65
L68
             29 S L67 NOT 56-81-5/CRN
                SEL RN 2 8
L69
              2 S E115-E116
L70
             39 S L65, L69
L71
             28 S L2 NOT L66, L70
                SAV L70 TRUONG517A/A
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L72
L73
              5 S L72 AND (POPP ? OR DANIEL ? OR SCHRODER ? OR JAWOREK ? OR FUN
L74
              8 S L72 AND BASF?/PA,CS
L75
              8 S L73, L74
L76
              3 S L72 NOT P/DT
1.77
             30 S L72 NOT L75, L76
L78
             26 S L77 AND (PD<=20030606 OR PRD<=20030606 OR AD<=20030606)
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L79
             26 S L77 AND (PD<=20020611 OR PRD<=20020611 OR AD<=20020611)
L80
             29 S L76, L78, L79
L81
              4 S L77 NOT L80
                SEL RN L75
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L82
L83
             28 S L82 NOT L2
L84
              8 S L83 AND L4
L85
              5 S L84 NOT C6/ES
L86
              3 S L85 NOT (117801-97-5 OR 117801-93-1)
     FILE 'HCAPLUS' ENTERED AT 07:58:08 ON 16 NOV 2006
L87
              2 S L86
L88
             37 S L87, L75, L80
L89 .
             8 S L88 AND L75
L90
             29 S L88 NOT L89
L91
             8 S L89 AND (PD<=20020611 OR PRD<=20020611 OR AD<=20020611)
     FILE 'REGISTRY' ENTERED AT 07:59:10 ON 16 NOV 2006
     FILE 'HCAPLUS' ENTERED AT 07:59:48 ON 16 NOV 2006
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